

Proceedings of International Conference on Humanities, Social and Education Sciences

April 13-16, 2023

Denver, CO, USA

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www.ihses.net

Volume 1, Pages 1-500

Proceedings of International Conference on Humanities, Social and Education Sciences

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ISBN: 978-1-952092-47-3

Editors: Mack Shelley, Mevlut Unal, & Sabri Turgut

Articles: 1-36

Conference: International Conference on Humanities, Social and Education Sciences (iHSES)

Dates: April 13-16, 2023

Location: Denver, CO, USA

Conference Chair(s):

Mack Shelley, Iowa State University, United States

Stephen Jackowicz, University of Bridgeport, United States

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Deconstructing Reviews of *The Beulah Show*: Blackwomen Domestic and Early Television Sitcoms

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Abstract: “Bert.” and Jack Gould wrote reviews of the October 3, 1950, premiere episode of *The Beulah Show* (ABC, 1950-1953) for *Variety* magazine and *The New York Times* newspaper, respectively. *The Beulah Show*, an adaptation of the radio series on CBS, was part of a small cohort of programs shaping a new television industry, a new home television experience, and a new dramatic televisual comedic tradition—situation comedy. In 1950 it was extremely rare to see Black women or Black men on television, but the star of *The Beulah Show* was a Black woman domestic Beulah Brown. Contextualizing *The Beulah Show* within the emerging television industry, I show that Bert and Gould’s reviews gave a partial indication of the most salient challenges and opportunities of Black women actors in postwar television programming that included limited roles (challenge), stereotyped images (challenge), and “situation” comedy (opportunity).

Keywords: *The Beulah Show*, Black Domestic, Black Female Actors

Citation: Nelson, A. (2023). Deconstructing Reviews of *The Beulah Show*: Blackwomen Domestic and Early TV Sitcoms. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 1-9), Denver, CO, USA. ISTES Organization.

Introduction

“‘Beulah,’ the story of one of those southern jewels who turns out corn bread and greens and generally manages the household, made the transition to television last night at 7:30 on A.B.C.” —Jack Gould, *The New York Times*.

“‘Beulah’ last Tuesday (3) made the transition from AM (it’s a cross-the-board strip on CBS for the same sponsor) to TV, but the video preem lacked the spontaneity and humor of the sound medium.” —Bert., *Variety*.

“Bert.” and Jack Gould wrote reviews of the October 3, 1950, premiere episode of *The Beulah Show* (ABC, 1950-1953) for *Variety* magazine and *The New York Times* newspaper, respectively. *The Beulah Show*, an adaptation of the network radio series on ABC and CBS from 1945-1954, was part of a small cohort of programs and actors shaping a new television industry, a new home television experience, and a new dramatic televisual comedic formula. Airing for a half-hour at 7:30PM (EST) on ABC television and sponsored by cleaning and personal care company Procter and Gamble headquartered in Cincinnati, Ohio, *Beulah* continued

on network radio as a “cross-the-board strip” broadcast Monday through Friday from 7:00PM to 7:15PM (EST) for the same sponsor (Bert.).

In 1950 it was exceedingly rare to see Blackwomen or Black men on television in any role, but the star of *The Beulah Show* was a Black domestic Beulah Brown. A white man, Marlin Hurt (May 27, 1904-March 21, 1946), first created and performed as Beulah on radio but the focus was on a Blackwoman working in an occupation that in reality more than half of working Blackwomen held in the United States at the time. *The Beulah Show* and its premise making a Black maid the central character was safe, noncontroversial, and unobjectionable, particularly for white Southern viewers.

While *Beulah* marked a significant period and threshold in the history of Blacks in radio and television, *Beulah* has received little scholarly attention except when criticized for the fact that it featured the stereotype of a Black domestic working for a white family or when noted in historical overviews of Black women in television (Castleman and Podrizak 59; Dates and Barlow 284-86; Gray 74-5; Hilmes 258-59; MacDonald, *Don't Touch* 350-51; MacDonald, *Blacks and White TV* 23-4, 29-30; Marc 35, 53, 178). Even in her 1951 autobiography, Ethel Waters, the first television Beulah, made little reference to the program. She writes:

I signed a contract with Bob Whitehead's firm to stay with [*The Member of the Wedding*] until July 1, 1951... I'm on the stage almost all the time in *The Member of the Wedding*. That's a lot of work to do eight performances a week. But I also have signed to do Beulah on television once a week for Procter and Gamble, the soap people, and a nice clean firm it is, too. (275-76)

World War II and the decade that followed were a pivotal and transitional period in the United States of America. Blackwomen domestics were pivotal and transitional figures and personas representing comfort for white Americans because they labored for them, were emotionally present for them, and knew their place in the classed, gendered, and racialized social hierarchy. Also, Blackwomen domestics represented the changing status of women and women of color in the U.S. Socially, *The Beulah Show* embodied conflicts, contradictions, and tensions surrounding gender, race, and class, even if these were generally neither fully exposed nor negotiated in the narrative. Yet at a time when segregationist practices were in full effect in the entire United States and Blackwomen continued to labor as domestics in white family homes, *The Beulah Show* was exemplary in attempting to harmonize social conflicts taking place in 1950s society and establishing moments of value-consensus and social harmony (Kellner 9).

The Beulah Show featured Beulah Brown, the live-in maid for the suburban white upper-middle-class Henderson family and was the first situation comedy to feature a Blackwoman domestic as the central leading character. On television, Beulah Brown was played by three Blackwomen actors, Ethel Waters, from 1950-1951; Hattie McDaniel, in 1952, who first played Beulah on radio from 1947 to 1951; and Louise Beavers, from 1952-1953. The Henderson family included father and businessman Harry (William Post, Jr., 1950-52; David Bruce, 1952-53), mother and homemaker Alice (Ginger Jones, 1950-52; Jane Frazee, 1952-53), and their 10-

year-old son Donnie (Clifford Sales, 1950-52; Stuffy Singer, 1952-53). Beulah could manage and solve all of their problems—except her own which was convincing her boyfriend and fix-it shop owner Bill Jackson (Percy “Bud” Harris, 1950-51; Arthur “Dooley” Wilson, 1951-52; Ernest Whitman, 1952-53) to marry her. Beulah’s girlfriend Oriole Winston (Thelma “Butterfly” McQueen, 1950-51; Ruby Dandridge, 1951-53), a domestic of the Henderson’s next-door neighbors, was always present to assist Beulah in resolving the weekly situations of her white employers (Brooks and Marsh, 96; Terrace 47).

Gould’s 242-word *Times* review and Bert’s 241-word *Variety* review of the debut of *The Beulah Show* highlighted salient challenges and opportunities of Black women actors in postwar American television programming. Also, these experiences existed within the contexts of Blackwomen actors’ relationship to Blackwomen in society, to Blackwomen in music, radio, film, and television, and to Black actors and white actors. Using examples from “Bill, the Babysitter,” episode 23 from season 1 that aired on approximately March 6, 1951, I discuss the experiences Blackwomen actors encountered with limited roles, stereotyped images, and “situation” comedy.

Limited Roles

“...but it does seem a pity that [Waters] could not have had a more substantial vehicle for her talents” (Gould, *New York Times*).

“She lent the warmth and humor, but there wasn’t enough meat in the script to pull the show out of the mediocre class” (Bert., *Variety*).

Blackwomen actors experienced limited roles both in terms of character depth and the number of jobs available in the infant television industry. An editorial written by Al White for *Our World Magazine* in February 1951 bemoans the fact of stereotyped roles and limited employment opportunities in radio and film. He shares his thoughts on the possibilities in television: “Everybody is familiar with the typed roles and meager employment opportunities these industries gave [Blacks]. If TV follows their lead, [Blacks] will be misrepresented and victims of vicious distortions. As a new industry, TV has a great opportunity to smash many un-American practices and set new standards. Will TV meet the challenge or will it miss the boat?” (Cited in Edmerson 378).

The Blackwomen with roles on the radio and television versions of *The Beulah Show* and *Amos ‘n’ Andy*, on CBS from 1951-1953, accounts for almost the total number of Blackwomen consistently working in radio and television in the early 1950s. In addition to Waters, McDaniel, McQueen, Dandridge, and Beavers, three Black women actors held regular supporting roles in the television version of *Amos ‘n’ Andy*. Ernestine Wade who played Sapphire Stevens, the wife of George “Kingfish” Stevens; Amanda Randolph who played Ramona Smith, Sapphire’s mother; and Jane Adams as Ruby Jones, the wife of Amos Jones. In addition, Amanda Randolph and Lillian Randolph, sisters, played the radio Beulah after Hattie McDaniel died in 1952. Several other Blackwomen were cast in minor transient roles in the television *Amos ‘n’ Andy*. These women played acquaintances, fiancées, girlfriends, party goers, secretaries, and wives. The actors included Millie Bruce, Willa

Pearl Curtis, Ruby Dandridge, Jeni Le Gon, Theresa Harris, Rosalind Hayes, Lillian Randolph, Patricia Washington, and Suzanne Webb (*Amos 'n' Andy*). Amos and Ruby Jones's daughter Arbadella played by Patti Marie Ellis, only appeared in one episode, "The Christmas Show," on December 25, 1952.

The appearance of *The Beulah Show* on radio and television coincided with the period when many Blackwomen worked as domestics, cooks, housekeepers, and caretakers in private household jobs. By 1950, 60 percent of all Black working women were concentrated in institutional (such as in the restaurant, lodging, and custodial industries) and private household service jobs while most of the other 40 percent of working Blackwomen were engaged in agricultural or manufacturing labor (Jones 198, 201). In this formative period of television of the 1950s (Gray 74) that contained "segregationist," or separate-but-unequal televisual discourses, Blacks were presented in stereotypical comic and subservient roles, thereby making them socially, culturally, and politically "separate and unequal" to whites. *The Beulah Show*, despite its progressive elements, fits within this discursive practice.

Although Beulah's domestic role was the primary type of role most available to Blackwomen actors, her dominance in the series did not match the lived experiences of Black women domestics in the United States who had no power, authority, dominance, or status in the white family households in which they worked. As the central character of a TV show, Beulah was afforded the same privileges as her white TV counterparts in other programs, especially the most dominant figures—fathers. The episodes of *The Beulah Show* literally centered her. Beulah was afforded this narrative importance, not because she was Black, female, and working class but because she was the star of the show. Beulah's gender, race, and occupation were three factors that should have signaled her insignificance, powerlessness, and subordination. However, television industrial practices dictated a different strategy by placing prominence upon and giving dominance to any star of a continuous episodic series. Gender, race, and class was overlooked, or evaded. By television production requirements, Beulah was a dominant figure who wielded both implicit and explicit power because she was the star of the series. However, although she was involved with every family issue, true to life, Beulah possessed no final authority within the Henderson household.

Stereotyped Images

"...on the whole the opening [installment] ... was regrettably stereotyped in concept" (Gould, *New York Times*).

"The Negro roles, standard type characterizations, were competently handled..." (Bert., *Variety*).

Virtually all postwar dramatic radio and television programming relied on stereotypes. However, the use of Black stereotypes was a painful, complicated practice because the historical, cultural, and social function of stereotyping attributed negative characteristics to and justified the inhumane treatment of all African Americans. Scientific racism and legal challenges to Black personhood and citizenship all contributed to shaping white (and

Black) attitudes toward African Americans resulting in a myriad of discriminatory and prejudicial actions, beliefs, and practices that affected every arena and aspect of Black lives. Preceded by and including World War II, beginning in the 1940s, demographic and economic changes accompanied by a marked shift in white racial attitudes produced opportunities for greater racial (but not gendered) equality (Thernstrom and Thernstrom).

Nevertheless, the pervasiveness of stereotypical images made the postwar civil rights efforts of African American organizations such as the National Association for the Advancement of Colored People (NAACP) and the National Urban League (NUL) difficult. In *The Beulah Show* and *Amos 'n' Andy*, the NAACP found “Negro women as cackling, screaming shrews”; “inferior, lazy, dumb and dishonest,” Black men; “unprofessional professionals”: Black doctors as “quacks and thieves” and Black lawyers as “slippery cowards, ignorant of their profession and without ethics”; and ‘Mammy-like’ female characters (MacDonald, *Blacks and White TV* 117). In the NAACP’s Resolutions of the 42nd NAACP Convention in Atlanta, Georgia, in 1951, the organization noted that

radio and television programs, such as the “Amos ‘n’ Andy” and “Beulah” shows, which depict the [Black] and other minority groups in a stereotyped and derogatory manner definitely tend to strengthen the conclusion among uninformed or prejudiced peoples that [Blacks] and other minorities are inferior, lazy, dumb and dishonest... (478)

As a result of these observations, the NAACP applied enough pressure to force ABC and CBS to cancel both television programs in 1953.

Like Blackwomen performers before her and her contemporaries, Beulah’s role closely resembled the Mammy stereotype. Mammies were loyal, faithful, obedient domestics who could also be domineering, strong-willed, and bossy (Dates 263). They were a “blend of quick temper, earthy wisdom, and love for [their] wards” (MacDonald, *Don’t Touch* 341) and typified the “good” Black mother figure in white homes (Collins 73). Beulah in “Bill, the Babysitter,” displayed her loyalty and selflessness to the Hendersons when she was willing to give up her night off to care for “little Effie,” the daughter of Clara and George Dunston—George Dunston being an important business acquaintance of Harry’s. It was the Dunstons’ “help’s night out” and they could not “locate a sitter.” While Beulah kept her plans to go to the home of Sadie Harris for the evening (Donnie Henderson spent the night with the Hawthornes), she assured Alice and Harry that she could take care of Effie until she left, at which time Bill, her boyfriend, could care for Effie.

Yet while they played stereotyped roles, Hattie McDaniel, Louise Beavers, and Ethel Waters also dissembled in their roles as “maid-as-performer” in *The Beulah Show* (Sturtevant 69). As Victoria Sturtevant argues the “culture of dissemblance allowed black women to adopt not a second personality but a role, an act which was divorced, consciously and completely, from their private identity” (69). This is a positive recognition accorded to these Black actors because *they* knew that they were “acting the part” and that they were *not* real Mammies who happened to work in film, radio, and television as well as in the homes of white families (Sturtevant 69).

“Situation” Comedy

“...on the whole the opening [installment] suffered from a trite story” (Gould, *New York Times*).

“The dialogue, however, was hardly original. There were the calculated mistakes in grammar most commonly identified with minstrel shows” (Gould, *New York Times*).

“Except for a few spots the comedy was weak, with improbable situations and unconvincing characterizations” (Bert., *Variety*).

The first situation comedy on radio, *Sam ‘n’ Henry* which debuted over WGN on January 12, 1926, was a 10-minute serialized drama revolving around two Black male migrants to Chicago, Illinois (Wertheim 29). Soon reincarnated as *Amos ‘n’ Andy* on WMAQ in 1928, other radio sitcoms followed after *Sam ‘n’ Henry*. In 1950, the situation comedy formula was still in flux but the radio sitcom in every aspect directly contributed to the television sitcom. One key difference, however, was the essential pleasure of this new medium of television. The techniques that made an aural entertainment form such as radio funny did not transfer identically to television. With the visual component of television, the sitcom formula relied on “showing” the comedy rather than “telling” the comedy.

Through the combination of family melodrama, double act standup comedy, and screwball comedy formulas, *The Beulah Show* presented its version of the situation comedy formula for television. Melodrama was evident in terms of character and music in the March 1951 episode “Bill, the Babysitter.” Beulah’s interactions with her employers Alice and Harry demonstrated the long-suffering trait embodied in her role as maid and star of the series. As noted above, Beulah offered to cancel her plans for the evening in order to care for the Dunstons’ daughter Effie. Such an action was inscribed onto Beulah to elicit an emotional response from the audience. The music heard in the episode evoked three emotions—sentimentality, suspense and foreboding, and playfulness. When Beulah demonstrated her selflessness with her employers and when she gave Bill his birthday gift, sentimental music played—sweet, melodious music composed of mainly violins. The musical mood of foreboding and suspense (foreshadowing the mischievous behavior that Effie would soon exhibit towards Bill) occurred when Beulah prepared to leave Bill and Effie. This sound was represented by dissonant and repetitive music tones and changing volume dynamics. Finally, when Bill interacted with Effie alone, upbeat light music played including the use of strings, flutes, and percussion.

The vaudeville-derived comedy duo or double act was also present in interactions between Ethel Waters’ Beulah and Butterfly McQueen’s Oriole. Oriole, speaking of Mr. Sprague, the ice man, who she thought was extremely interested in her says, “You know, he says I’m the most mental girl he knows.” Beulah responded to Oriole, but the substance and tone of her response suggested that she knowingly was partly speaking to the audience, “Sure he didn’t say mental *case*?” The double act popular in the United Kingdom and United States is representative of the interplay between mimetic and ironic communication systems (Chesebro 370-71). Operating within these communication systems, the individuals are in opposition to the other, but each differs in their level of

intelligence and perceived capacity to control themselves and the circumstances of their lives as compared to the audience. The protagonist is mimetic and typically represents the audience. The comic foil represents the “Other.” Overall, the Black characters in *Beulah* provided the comedy in the series while the white characters remained as observant foils. However, since Beulah was the starring character, she was the common-sensical protagonist and the other Black characters—Bill and Oriole—were the comic foils.

In addition to melodrama and double act standup comedy, the screwball comedic tradition in film of the 1930s and 1940s was present (Schatz 150-51) in “Bill the Babysitter.” Like the formula screwball comedy films, this episode was full of stereotyped characters, relational misunderstandings, and zany antics (Castleman and Podrizak 58-9). Three plots unfolded in the episode: (1) Bill was the babysitter for the Dunstons’ daughter Effie. (2) Beulah went to someone else’s home to secretly finish knitting a sweater for Bill’s birthday, which was the next day. (3) Oriole engaged with what she perceived as the romantic advances of Mr. Sprague, her “would-be” new boyfriend. Zany antics primarily involved Bill and Effie. At first Effie appeared to be a quiet, seven-year-old even taking a nap when Beulah left the house to finish knitting Bill’s sweater. Bill quickly learned that this was not the case. First, Effie inserted a lit match into Bill’s shoe as he napped, then, to put out the flame, Effie dowsed Bill’s shoes with water. Next Effie asked for Bill’s permission to make fudge. She created a mess on the floor, spilling sugar, flour, chocolate, eggs, and milk. In their wrestling with the broom (arguing over who would clean up the mess), Bill fell down on the floor. Next, Effie instigated conflict between Bill and Mr. Sprague when she lied to Mr. Sprague saying that Bill and Oriole had kissed. Effie, seeing that she was in trouble, hid herself away from Bill. Bill searched for Effie throughout and outside of the house but to no avail. In the meantime, the Hendersons returned home and could not find Effie. Although Beulah was absent during all of Bill’s interactions with Effie, *she* (as the protagonist that she was) was the one who found Effie in the basement. This one episode combined all the elements from the three prior popular art forms of family melodrama, double act standup comedy, and screwball comedy film. Therefore, *The Beulah Show* bridged the mix of family melodrama, double act standup comedy, and screwball comedy traditions thus contributing to the emerging situation comedy genre while at the same time showcasing Blackwomen characters.

Conclusion

Television sitcoms of the 1950s idealized white nuclear families in postwar American culture. *The Beulah Show* was a parable constructed for emerging white American patriarchal middle class nuclear families instructing all Americans in the appropriate ways of living in the postwar gendered-racialized-classed social hierarchy of which Blackwomen were at the bottom. Nevertheless, the unique inclusion of a domestic in the white nuclear family in *The Beulah Show* affected the narrative and mitigated the normal placement of the father.

Bert and Gould’s reviews of the debut episode of *The Beulah Show* was itself part of Blackwomen’s experiences in television and, consequently, a deconstruction of their reviews gave a partial indication of their most salient challenges and opportunities. Pointing towards their limited roles, stereotyped images, and “situation” comedy,

these reviewers revealed the primary contexts of postwar Blackwoman actors' experiences. In describing these challenges and opportunities, this paper seeks to reveal a more robust documentation of postwar Blackwomen actors' multidimensional experiences connected to early American television situation comedy.

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Investigation of Injury Anxiety Levels of Students Playing Sports

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Abstract: In this study, it is aimed to examine the differentiation status of the participants in terms of some demographic variables in order to determine the anxiety of the students towards sports injury. This quantitative study was carried out in a descriptive survey model. The sample of the study consists of 317 participants from high school students who continue their education in schools administered by Onikisubat and Dulkadirođlu District Directorate of National Education in Kahramanmaraş city center in Turkey. The data of the research are analyzed using the statistical software program Jamovi 2.3.16. As a result of the research, it has been found that the anxiety scores of the participants towards sports injury are moderate. In the sports injury anxiety scale, statistically significant differences have been found in terms of what kind of sports they do, how many days a week they do sports, and whether they are injured or injured while doing sports. As a result, with this research, students' anxiety about sports injury has been determined in terms of different variables.

Keywords: Sport, Injury, Anxiety, Student.

Citation: Durmusoglu, M. V. & Atilgan, D., (2023). Investigation of Injury Anxiety Levels of Students Playing Sports. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 10-21), Denver, CO, USA. ISTES Organization.

Introduction

Anxiety is the uncertainty of how it will happen at the moment and in the future; perhaps it can be defined as a state of worry and uneasiness about a subjective situation that is unlikely to happen (Sahin, 1985; Erskine, 2015; Kring and Johnson, 2015). Anxiety, which negatively affects the performance of the athlete, is also expressed as tension and fear under threat (Buyukozturk, 1997).

Sports injury anxiety is a situation that occurs during sports activities and causes the athlete to stay away from sports life and requires medical treatment (Fuller and his friends 2006; Li and her friends 2020). Athletes explain that the injury prevents them from participating in trainings or competitions, and they fear that they will

not be able to recover the performance loss they experienced while they are away from sports and that they will be injured again when they return to sports. In the literature, there is a common view that the anxiety levels of athletes are high that they cannot return to their previous performance levels after injury (Budak and his friends, 2020; Podlog and Eklund, 2005; Glazer, 2009).

Anxiety of Losing Talent: It can be expressed as the fear of not being able to fully display the abilities of the athlete and the anxiety of not reaching the level he wants to reach. Regarding the anxiety of losing talent, which is the type of anxiety that athletes often experience; Özder (2010), In his study, she stated that the athletes were most concerned about losing their athletic abilities when they were injured, and revealed that the injury anxiety of the athletes was related to the severity of the injury and the number of injuries experienced.

Weak Perception Anxiety: It is the formation of the thought that the athlete, who is exposed to injuries, is not at a sufficient level physically by her athlete friends, managers and social environment. In a similar statement, Aydoğan and her friends, (2022) stated that the athletes who experienced injuries felt inadequate because they could not participate in the training or the competition, thinking that they could not be effective in reaching the goals set by the team.

Suffering Anxiety: It is thought as the thought that the pain that the athlete will be exposed to in injuries and injuries will make her feel helpless and weak, and the anxiety of not being able to tolerate these pains. In related studies; Cassidy (2006) found in his study that college athletes who had at least three previous injuries scored significantly higher on pain-related anxiety than athletes who had not been injured before. Steffen and her friends (2009), in their study on female football players, stated that players with a history of injury felt an anxiety reaction that weakened their performance compared to those without a history of injury.

Anxiety of Disappointment: It is the anxiety of not being able to meet the expectations of the athletes, family, social environment, spectators and managers who have invested in them. It is important for the coach, families, teammates to know how the injured athlete feels, and to determine the changes in their psychological state after the injury, in terms of providing the necessary motivation for the athlete to return to sports life (Gennarelli and his friends 2020).

Anxiety of Losing Social Support: It is imagining that the athlete will not be able to reach the desired level again after the injury, and thinking that people will move away from her in parallel with this thought.

Re-Injury Anxiety: It can be expressed as the fear of experiencing the pain, loss of time, poor performance and economic losses experienced by the athlete who is exposed to sports injury. It is quite normal for an athlete injured during sports activities to have fear and anxiety in the following processes due to this experience. Mankad and her friends, (2009), in a study they conducted; They revealed that, as a result of sports injuries that occur in training and/or competitions, athletes experience significant emotional traumas such as being deprived of their athlete identity, not being able to play again, being injured again, and that their depressive and anxiety

levels increase due to these traumas. In addition, Konter (1996) found in his study that the anxiety levels of football players who were exposed to a sports injury were significantly higher than those of football players who were not exposed to sports injuries.

In this study, which aimed to examine the differentiation status of the participants in terms of some demographic variables in order to determine the anxiety of the students towards sports injury, answers were sought to the following questions:

1. What are the students' anxiety scores for sports injuries?
2. Is there a significant difference in students' anxiety about sports injuries in terms of the variable of which type of sport they do?
3. Is there a significant difference in students' anxiety about sports injuries in terms of how many days a week they do sports?
4. Is there a significant difference in students' anxiety about sports injuries in terms of the variable of injury and injury while doing sports?

Method

Research Model

The research is a quantitative study and was carried out in a descriptive survey model. In this study, it was ensured that the differentiation status of the participants in terms of some demographic variables related to the students' anxiety about sports injuries was determined. In this study, consent was obtained from all participants with an 'Informed Voluntary Consent Form'.

Population and Sample

The universe of the research consists of high school students who continue their education in schools in Kahramanmaraş. The sample of the study consisted of 317 [female (N:171) and male (N:146)] high school students studying in schools selected by random sampling method within the body of the Directorate of National Education in Kahramanmaraş city center.

Results

Personal information of the high school students participating in the study is given in Table 1.

Table 1. Participant information included in the research sample

By Demographic Variables		N	%
What Kind of Sports	Individual Sports	117	36.9
	Team Sports	200	63.1

	1-3 days a week	173	54.6
How Many Days of Sports per Week	3-5 days a week	84	26.5
	5-7 days a week	31	9.8
	I do sport every day	29	9.1
	Injury and Injury	Yes	94
While Playing	No	137	43.2
Sports	Partially	86	27.1

Data Collection Tools

Sports Injury Anxiety Scale

It was developed by Rex and Metzler (2016). It was adapted into Turkish by Caz, Kayhan and Bardakçı (2019). It is a 5-point Likert type. The researchers who adapted the scale into Turkish found the Cronbach Alpha value of the scale as .87; sub-factors anxiety of losing ability .72, anxiety of being perceived weak .64, anxiety of suffering .78, anxiety of disappointment .88, anxiety of losing social support .81 and re-injury anxiety .61. In this study, the Cronbach Alpha coefficient was .90; anxiety of losing one's ability was .79, anxiety about being perceived weak was .75, anxiety about suffering was .74, anxiety about disappointment was .88, anxiety about losing social support was .87, and re-injury anxiety was .78.

Data Analysis

Data collection was started in March 2022 and was completed in June 2022. Scale forms were sent to the participants individually and through the school principals, and usable feedback was obtained from 317 participants. The data of the research were analyzed using the statistical software program Jamovi 2.3.16. Whether the scores obtained to determine the tests to be used in the research show a normal distribution or not was examined by the skewness coefficient method (Buyukozturk, 2018). As a result of the normality test, the skewness values of the data were .919 in the "Sports Injury Anxiety Scale; In the sub-factors, it was found that the anxiety of losing one's ability was .738, the anxiety of being perceived weak was .754, the anxiety of suffering was -.120, the anxiety of disappointment was .282, the anxiety of losing social support was .885, and the re-injury anxiety was -.002. Since the distribution was normal in all dimensions, t-Test and One-Way Analysis of Variance (ANOVA) were used to determine the differentiation between the variables, and Post-Hoc tests were used to determine the groups with a difference for the F value found to be significant.

Findings

In this part of the research, statistical evaluation of the data was made within the scope of the research and the results of the evaluation were shown in tables. Findings regarding the arithmetic average and standard deviation values of the scores of the of the participants obtained from the sports injury anxiety scale are shown in Table 2.

Table 2. Sports injury anxiety scale arithmetic mean and standard deviation and sports injury anxiety scale anxiety score values of the participants.

Scale-Factor	N	Min-Max	M	SD
Sports Injury Anxiety Scale Arithmetic Mean and Standard Deviation Values	317	1-5	2.67	.77
Sports Injury Anxiety Scale Anxiety Score	317	23-91	50.78	14.63

When Table 2 is examined, it is seen that the arithmetic mean and standard deviation and sports injury anxiety scores of the participants are moderate. The t-test results of the sports injury anxiety scale scores according to the what kind of sports the participants do status of the participation are shown in Table 3.

Table 3. Independent group t-Test findings in the factor dimensions of sports injury anxiety scale scores according to the variable of what kind of sports the participants do.

Scales	Factors	What Kind of Sports Do They Do		M	SD	t	p
		Individual	Team				
Sports Injury Anxiety Scale	General	Individual		2.92	.93	4.48	.000*
		Team		2.53	.62		
	Anxiety of Losing Talent	Individual		2.62	1.16	2.71	.007*
		Team		2.31	.86		
	Poor Perception Anxiety	Individual		2.69	1.24	4.00	.000*
		Team		2.19	.95		
	Suffering Anxiety	Individual		3.37	.99	3.11	.002*
		Team		3.03	.90		
	Anxiety of Disappointment	Individual		2.96	1.22	2.71	.007*
		Team		2.61	1.06		
	Anxiety of Losing Social Support	Individual		2.48	1.19	3.49	.001*
		Team		2.03	1.05		
	Re-Injury Anxiety	Individual		3.28	1.15	3.26	.001*
		Team		2.88	.97		

*(p<0.05)

According to Table 3., as a result of the t-Test, a statistically significant difference was found in the sports injury anxiety scale score and in all of the sub-factors in terms of the type of sports they do (p<.05). It was found that students who do individual sports have a significantly higher level of anxiety about losing their talent,

anxiety about being perceived weak, anxiety about being disappointed, anxiety about losing social support, anxiety about re-injury, and overall scale compared to students who do team sports.

The results of the one-way analysis of variance (ANOVA) test in factor dimension according to how many days a week the do sports variable regarding the sports injury anxiety scale scores of the participations are shown in Table 4.

Table 4. One-way analysis of variance (ANOVA) findings in the factor dimension of sports injury anxiety scale scores according to the variable of how many days a week the participants do sports.

Factors	How Many Days A		M	SD	F	p	Groups with a difference (Post-Hoc Tests)
	Week Do They Do	Sports					
General	1-3 days per week (a)		2.77	.78	3.47	.016*	a - b
	3-5 days per week (b)		2.45	.68			
	5-7 days a week (c)		2.78	.83			
	Every day (d)		2.66	.78			
Anxiety of Losing Talent	1-3 days per week (a)		2.52	1.01	1.58	.194	-
	3-5 days per week (b)		2.24	.86			
	5-7 days a week (c)		2.33	1.22			
	Every day (d)		2.47	.90			
Poor Perception Anxiety	1-3 days per week (a)		2.48	1.11	3.29	.021*	a, c - b
	3-5 days per week (b)		2.06	.97			
	5-7 days a week (c)		2.55	1.09			
	Every day (d)		2.51	1.23			
Suffering Anxiety	1-3 days per week (a)		3.31	.83	4.99	.002*	a, c - b
	3-5 days per week (b)		2.85	1.07			
	5-7 days a week (c)		3.24	1.00			
	Every day (d)		3.02	.99			
Anxiety of Disappointment	1-3 days per week (a)		2.83	1.12	1.18	.317	-
	3-5 days per week (b)		2.58	1.08			
	5-7 days a week (c)		2.77	1.35			
	Every day (d)		2.59	1.08			
Anxiety of Losing Social Support	1-3 days per week (a)		2.24	1.11	2.81	.039*	a, c, d - b
	3-5 days per week (b)		1.93	1.09			
	5-7 days a week (c)		2.35	1.24			
	Every day (d)		2.53	.99			
Re-Injury Anxiety	1-3 days per week (a)		3.10	1.03	1.76	.155	-

3-5 days per week (b)	2.89	1.05
5-7 days a week (c)	3.26	1.26
Every day (d)	2.78	.96

*($p < 0.05$)

When Table 4 is examined, as a result of the analysis, it has been revealed that there are statistically significant $p < 0.05$ differences among the sub-factors, anxiety of being perceived weak, anxiety of suffering, anxiety of losing social support and overall scale, according to the variable of how many days a week the participants do sports. As a result of the Post-Hoc test performed to determine which groups the differences originate from, it is seen that those who do sports 1-3 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factors of poor perception anxiety and suffering anxiety, it was seen that those who do sports 1-3 days a week and 5-7 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factor of anxiety about losing social support, it is seen in the table that those who do sports 1-3 days a week, 5-7 days a week and every day have higher sports injury anxiety than those who do sports 3-5 days a week. According to the variable of how many days a week the participants do sports, there was no statistically significant $p < 0.05$ difference in the sub-factors of anxiety about losing talent, anxiety about disappointment and re-injury.

The results of the one-way analysis of variance (ANOVA) test in factor dimension according to injury and injury while doing sports injury anxiety scale scores of the participations are shown in Table 5.

Table 5. One-way analysis of variance (ANOVA) findings in the factor dimension of the sports injury anxiety scale scores of the participants according to the variable of injury and injury while doing sports.

Factors	Injury and Injury While Playing Sports	M	SD	F	p	Groups with a
						difference (Post-Hoc Tests)
General	Yes (a)	3.01	.99	13.91	.000*	a – b, c
	No (b)	2.52	.63			
	Partially (c)	2.55	.56			
Anxiety of Losing Talent	Yes (a)	2.82	1.29	11.38	.000*	a – b, c
	No (b)	2.25	.75			
	Partially (c)	2.27	.84			
Poor Perception Anxiety	Yes (a)	2.65	1.35	4.59	.011*	a – b
	No (b)	2.21	.94			
	Partially (c)	2.33	.97			
Suffering Anxiety	Yes (a)	3.43	1.19	5.70	.004*	a – b, c
	No (b)	3.05	.87			
	Partially (c)	3.03	.67			
Anxiety of	Yes (a)	3.18	1.28	11.09	.000*	a – b, c

Disappointment	No (b)	2.55	1.00			
	Partially (c)	2.55	1.03			
Anxiety of Losing Social Support	Yes (a)	2.43	1.35			
	No (b)	2.18	1.06	4.15	.017*	a – c
Re-Injury Anxiety	Partially (c)	1.96	.85			
	Yes (a)	3.41	1.12			
Re-Injury Anxiety	No (b)	2.79	1.04	10.43	.000*	a – b, c
	Partially (c)	3.00	.89			

*($p < 0.05$)

When Table 5 is examined, as a result of the analysis, a statistically significant difference was found in the sports injury anxiety scale score and in all of the sub-factors according to the variable of injury and injury while doing sports ($p < .05$). As a result of the Post-Hoc test, which was conducted to determine between which groups the differences originated, the sub-factors anxiety of losing ability, anxiety of suffering, anxiety of disappointment, re-injury anxiety, and the overall scale of injury and injury while doing sports were compared to those who were yes, no, and those who had partial sports injury. It can be seen in the table that their concerns are higher. In the sub-factor of perceived weak anxiety, it was determined that those who were injured and experienced injury while doing sports had higher sports injury anxiety than those who were yes. In the sub-factor of the anxiety of losing social support, it is seen in the table that those who were injured while doing sports and who were injured while doing sports had higher anxiety about sports injuries than those who were partially injured.

Discussion and Conclusion

In this study, it was ensured that students' levels of anxiety about sports injury anxiety and their differentiation status in terms of some demographic variables they had were determined.

It was concluded that the arithmetic mean and standard deviation and sports injury anxiety scores of the participants were moderate. Although some researchers have stated that athletes with high anxiety levels are more likely to be exposed to more severe injuries than athletes with low anxiety levels, some researchers have stated that there is no significant relationship between sports injury and anxiety formation (Steffen and her friends, 2009; Sibold and his friends, 2011). Therefore, it is understood that there is still much to be discovered about the relationship between anxiety and injury (Johnson and his friends, 2014).

With this; Caz, Kayhan and Bardakci (2019) stated that as the mean score (total score and sub-dimensions) obtained from the scale increases, injury anxiety increases. On the other hand, Ivarsson and Johnson (2010); They stated that more injuries were observed in some athletes with high anxiety levels. Negative thoughts and experiences can increase the athlete's risk of re-injury and have a detrimental effect on the athlete's self-

confidence and post-injury performance (Podlog and Eklund, 2005; Glazer, 2009). In terms of the variable of what kind of sports the students do, the anxiety of losing talent, the anxiety of being perceived weak, the anxiety of suffering, the anxiety of disappointing, the anxiety of losing social support, the anxiety of re-injury were significantly higher than the students who do team sports in terms of the sub-factors and the overall scale. Results have been reached. Ünver and his friends, (2020), in his research on sports students at the university; When the sports injury anxiety sub-dimension scores were compared according to the branches, it was found that muaythai athletes in the sub-dimension of perceived weak anxiety, handball players in the anxiety of disappointment sub-dimension, athletics athletes in the anxiety of losing social support sub-dimension, and football players in the sub-dimension of the anxiety of losing ability were found to have significantly higher anxiety scores has done.

Karayol and Eroglu (2020) determined significant differences in favor of team sports in the sub-dimensions of pain anxiety and re-injury anxiety, which are among the sub-dimensions of sports injury anxiety, according to the sport branch variable, but could not see any significant difference in other sub-dimensions. Kayhan, Yapıcı and Ustun (2019) conducted a study on female athletes and found significant differences only in the sub-dimension of skill loss anxiety of the participants who do individual sports. Moreover; Tanyeri (2019), in his study of athletes from different branches, did not find any difference in terms of injury anxiety in athletes interested in team sports and individual sports.

In general, it can be said that the athletes who do team sports have more anxiety about losing their place and position in the team and getting injured again, while the athletes who do individual sports have more injury anxiety at the point of being exposed to the sports branch they have done and close contact.

According to the variable of how many days a week the participants do sports, it was determined that those who do sports 1-3 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factors of poor perception anxiety and suffering anxiety, it was determined that those who do sports 1-3 days a week and 5-7 days a week have higher sports injury anxiety than those who do sports 3-5 days a week. In the sub-factor of anxiety about losing social support, it was found that those who do sports 1-3 days a week, 5-7 days a week and every day have higher sports injury anxiety than those who do sports 3-5 days a week. It can be said that those who do sports 3-5 days a week do moderate and balanced sports. As a result of the research, Atilgan (2022) determined that the participants whose weekly training number is 3-4 days have higher scores in the general individual competitiveness scale and in the dimension of enjoying competition than the participants whose weekly training number is 1-2 days and 5-6 days. In the dimension of avoiding the competition, on the contrary, it was determined that the participants with 3-4 days of weekly training had lower scores than the participants whose weekly training number was 1-2 days and 5-6 days. Atilgan (2022) expressed these results as the participants whose weekly training number is 3-4 days compared to the participants whose weekly training number is 1-2 days and 5-6 days, their individual competitiveness level is good, they enjoy competition and they do not avoid the competition.

Frequency of doing sports is effective in motivating the athletes as well as reducing their worries about being exposed to injuries. As in every other subject, moving away from the field about sports injury anxiety also brings disability anxiety. Harmony, stability and balance are the indispensable main elements of sports. Our research results show that the balance of work and stability in the frequency of doing sports minimize the injury anxiety levels of the athletes.

According to the variable of injury and injury while doing sports, it was determined that the anxiety of losing ability, anxiety of suffering, anxiety of disappointment, re-injury anxiety, and in the scale, those who were injured and injured while doing sports had higher levels of sports injury anxiety than those who did not and those who were partially injured while doing sports. In the sub-factor of perceived weak anxiety, it was found that those who were injured while doing sports and those whose injury status were yes had higher sports injury anxiety than those who were no; In the sub-factor of the anxiety of losing social support, it was concluded that those who were injured while doing sports and those who had an injury had higher anxiety about sports injury than those who were partially injured. It is considered as an expected result that the anxiety scores of those who have experienced injury and injury while doing sports are higher. Sport; movement, struggle, forcing physical capacity, stress, anxiety, facing difficulties, being exposed to blows and injury. It is seen as a natural result that such situations cause anxiety.

Conclusion

As a result of this research; According to the sports branch of the athletes, the contact and difficulties they are exposed to, whether the sport is an individual and team sport, the level of risk involved in the sport, the frequency of the sport, and whether the athletes have been injured or not, the anxiety of the athletes has been revealed. As a result, with this research, sports injury anxiety of students was determined in terms of different variables.

Recommendations

New results can be obtained by using the sports injury anxiety scale used in this study together with different scales. For example, as a new study proposal, a research can be conducted by using the sports injury anxiety scale and the anxiety elimination scale together. Injury concerns and causes can be compared by conducting studies on athletes of different age groups. Anxiety affects sports negatively, as it does in every field. It is of great importance that sports psychologists are trained competently and serve in the field.

Notes

There is no financial support and conflict of interest in this study. The authors would like to thank 317 participating students for their cooperation and willingness to respond to this research.

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Exploring the Efficacy of Cognitive-Behavioural Therapy for Treatment of Pathological Gambling -A Systematic Review

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Abstract: According to the DSM-IV criteria, pathological gambling is classified as a type of “addiction disorder”, associate with magnificent negative consequences to individual’s lives. Today, cognitive behavioural therapy (CBT) is found to be effective at reducing gambling frequency and severity by changing the negative distorted thoughts among problem gamblers. The aim of this study is to examine the effectiveness of cognitive behavioural therapy as a treatment of pathological gambling among problem gamblers. A systematic review was carried out across four databases using different search terms. A total of seven journal articles were selected at the end of the process based on the specific inclusion and exclusion criteria. CBT was found to have significant effect on reduction of gambling frequency and severity of gambling symptoms among problem gamblers. However, results demonstrated a low effect on improvements in the amount of money gambled among participants after receiving CBT. The use of randomization in this review increases the overall validity of findings. However, most participants were originated from Western cultures, which create the issue of cultural bias. Future research conducted on Chinese gamblers, with multimodal approach is necessary to deepen our understanding on effectiveness of CBT for treatment of pathological gambling in the long-term.

Keywords: Cognitive behavioural therapy, Pathological gambling, Gambling severity, Cultural bias, Multimodal approach

Citation: Vong, C. C. (2023). Exploring the Efficacy of Cognitive-Behavioural Therapy for Treatment of Pathological Gambling – A Systematic Review. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 22-49), Denver, CO, USA. ISTES Organization.

Introduction

What is Pathological Gambling?

“Pathological gambling”, also known as problem gambling, is a common term used to describe the negative consequences caused by excessive gambling behaviours. The term “excessive” means gambling is beyond a person’s control (Bellringer, 2002). Pathological gambling refers to repeat gambling in an impulsive way, which cause numerous negative impacts on a person’s mental health, occupation and relationships with significant others. Problem gamblers often involve in different types of gambling activities, including slot machines,

roulette in casinos, betting on horse racing, and so on (Forward & Craig, 1994; APA, 2000). The main characteristics or symptoms of pathological gambling are presented in the Diagnostic and Statistical Manual of Mental Disorders (DSM).

Symptoms of Pathological Gambling

According to DSM-IV criteria, (APA, 2000; Reilly & Smith, 2013), if a person presents with repeated gambling behaviours with five or more clinical symptoms within one month, he or she will be diagnosed as a pathological gambler. The associated symptoms include:

1. Preoccupy with gambling desires or urges all the time
2. A desire to gamble with increasing amounts of money in order to reach desirable excitement
3. Try to reduce or stop gambling repeatedly without success
4. Feeling depress, anxious or irritable once gambling behaviours stop
5. Use gambling as a way to escape from reality or to reduce feelings such as anxiety and depression
6. After losing money, gambling often acts as a way to chase back or returns one's losses
7. Tell lies to family members, friends or therapists in order to hide one's severity of gambling symptoms
8. Commit serious crimes, such as theft, fraud or forgery
9. Result in negative impacts on personal lives, such as career development, family relationships or educational achievement
10. Depend on others to help resolve a financial crisis or situation due to excessive gambling behaviours

The DSM-IV criteria describe pathological gambling as a type of impulsive control disorder. However, soon after the DSM-V criteria established, pathological gambling had shifted to a new classification system, which classified as one of the "substance-used disorder and addictive disorders" (APA, 2013; Reilly & Smith, 2013).

Factors Contribute to Problem Gambling

There are three factors that lead to the development of problem gambling among pathological gamblers in the long-term. This can be divided into psychological or emotional factors, social factors and family factors.

Psychological or Emotional Factors

People's gambling behaviours are directed mostly by their psychological or emotional needs. In order to maintain more balance lifestyle, most people decide to engage in gambling activities so as to fulfill their excitement and happiness.

People gamble for different reasons, some of them want to gain confidence and feelings of satisfaction. They wish to chase back the lost money or to win more money by continue involving in different gambling activities. However, they often misinterpret the meaning of success and overestimate their likelihood of winning. This

results in them becoming more addicted to gambling. Gamblers also wish to win money in order to receive admiration from their family members and friends. They believe that they have sufficient control and power over their gambling behaviours. However, their false predictions only lead to higher possibilities of gambling addiction. For adolescents, they gamble for excitement and adventure reasons. They often spend huge amount of time engaging in high-risk activities, such as use gambling, as a way to escape from boredom in their daily lives (Tung Wah, 2007). Last but not least, psychological distress and environmental stressors also lead to the development of problem gambling. Negative emotional states, such as feelings of anxiety and depression often contribute to higher possibility of gambling addiction. Gambling not only acts as a form of comfort for individuals suffer from mental illness, but also acts as a way to escape from their reality (Bellringer, 2002).

Studies provide evidence that most problem gamblers show comorbid symptoms of depression, anxiety or psychosis as a result of extreme stress. Out of all mental disorders, depression shows the highest rate of comorbidity among pathological gamblers (England & Gotestam, 1991). Apart from depressive symptoms, pathological gamblers also experience low self-esteem, sense of hopelessness or guilt, which may create problems in their relationships with others (Bellaire & Caspari, 1992). If those feelings last for a long period, this may increase their chances to commit suicide. Ibanez and colleagues (1992) found that suicidal behaviours among problem gamblers tend to associate with their gambling outcomes. Other addictive behaviours, such as alcohol dependency or drug abuse may also increase gambler's tendency to commit suicide (Ciarrocchi & Richardson, 1989).

Social Factors

Pathological gamblers often preoccupy with thousands of gambling thoughts, which lower their motivation at work. This often results in them leaving their job positions, which will eventually create difficulties in gaining new employment opportunities in the future. Financial problems become a big issue faced by many pathological gamblers. Problem gamblers often rationalize their gambling behaviours, and believe that they can chase back the money they lost. This results in them continue to gamble until they lose all the money they have. Once this happens, they are in huge number of debts. When they owe too much money, they may engage in a variety of criminal activities such as forgery, stealing or fraud. Some may even choose to sell their personal or family belongings in order to pay off their debts (Lesieur, 1987). Young gamblers demonstrated a higher prevalence to criminal activities compared to adult gamblers (Blaszczynski & Silove, 1996). Problem gamblers also tend to lie or deny their gambling situations to their family members, friends or colleagues. They often hide the fact of their gambling behaviours due to the fear of rejection from others (Bellringer, 2002).

Family Factors

Another problem faced by many pathological gamblers is their relationships with family members. Long-term stressors, financial problems and lack of social support are the main causes that lead to the development of gambling urges or desires of winning, without considering the needs of their family (Bellringer, 2002). Studies

found high rates of divorce or family arguments, such as domestic violence or child abuse among families of pathological gamblers (Timothy, 2005).

Process of Gambling Addiction

The process of gambling addiction can be divided into three stages. During the first stage, gamblers start to gamble for the first time. Previous experiences of winning increase their self-awareness. They see themselves with a good fortune and will be successful with winning money, this increases their desires to gamble. During the second stage, gamblers start to lose money. This period lasts until they lose all the money they have. During that time, the previous experiences of winning reminds them, which creates the desires or urges to continue gamble until they chase back the money they lost. The thoughts to continue gamble often preoccupy within their minds. During the last stage, gamblers keep on losing more and more money, experiencing serious financial and relationship problems with family and friends. If their gambling behaviours continue, they may even owe debts which they don't have the effort to pay off. If this happens, some of them choose to borrow money from their colleagues or even commit crimes within the society. Gamblers with severe symptoms often deny their gambling behaviours or tell lies to others so as to conceal their own financial problems due to gambling addiction (Bellringer, 2002).

Before introducing the effect of cognitive behavioural therapy as treatment of pathological gambling, we need to first understand the concept of cognitive distortion and the role of cognitive distortion in the process of gambling addiction.

Cognitive Distortion

Cognitive distortions are the negative automatic thoughts that occur consistently from time to time in our daily lives, they often reflect in the form of thinking errors. Cognitive distortion can lead to significant emotional distress, such as anxiety and depression (Rector, 2010). There are two types of thinking errors occur among pathological gamblers. They include gambling specific thinking errors and general thinking errors. Burns listed some examples of cognitive distortions related to our day-to-day thinking patterns, including all-or-nothing thinking, overgeneralization, catastrophizing and personalization (Burns, 1999).

Tony Toneatto, a licensed clinical psychologist working in the area of Buddhism, psychology and mental health at the University of Toronto, characterized different thinking errors related specifically to gambling outcomes, including illusion of control, gambler's fallacy and predictive control. (Timothy, 2005). Illusion of control refers to the belief that individual has the ability to directly or indirectly control the outcomes of their gambling behaviours. Gambler's fallacy is another interpretive bias, which the gambler reappraises losses as an accurate predictor that a win is fast approaching, and that he or she will soon or eventually win. Predictive control refers to the belief that the gambler has the ability to make accurate predictions based on different signs, cues or personal intuitions during gambling activities (Toneatto, 1999). Raylu and Oei (2004) added two more cognitive

errors relating to gambling outcomes, including gambling related expectancies and perceived inability to stop gambling.

Gambling related expectancies refer to the expected positive feelings that one perceives after gambling. This explains why a gambler chooses to continue gambling despite of huge loss. Problem gamblers often hold negative thoughts such as, “I am not able to stop gambling” or “Gambling is overpowering me”, which will eventually lead to an inability to control his or her gambling behaviours, and gambles to confirm that their beliefs are right (Raylu & Oei, 2010).

Cognitive Distortion In The Process of Gambling Addiction

The ABC model, also known as the “ABC technique of irrational beliefs”, is often used in cognitive-behavioural therapy, which analyzed different thought patterns and reactions occur within each pathological gambler during stressful situations. This model was first developed by famous American psychologist Albert Ellis (1957), and consists of three components: activating event (A), belief (B) and consequences (C). Activating events include both internal feelings and external events. Belief refers to thoughts that determines the consequences. Last but not least, consequences can be separated into both the behavioural and emotional outcomes (McLeod, 2019). The idea of this model was adapted from the rational emotive behaviour therapy (REBT), which aims to challenge and replace patient’s dysfunctional or irrational beliefs to more rational ones (Ellis, 1991). For example, when a client feels depressed while walking past a casino, he or she may trigger the thought of “gambling is the only way to relieve my depression”. This will turn on the behavioural consequence, which the client starts having the urges to gamble. If these thoughts continue, they may encourage the client to gamble more and more despite of huge losses. This will eventually lead to the development of negative emotional consequence, such as feelings of hopelessness or guilt, that contribute to higher possibilities of gambling addiction among problem gamblers.

Section 4 below introduces the origin, component and theory of cognitive behavioural therapy as a treatment of pathological gambling among adult problem gamblers.

Cognitive Behavioural Therapy

Cognitive-behavioural therapy (CBT) is a structure and goal-oriented intervention, that focuses on reducing various symptoms of anxiety and depression among people suffer from mental disorders. The purpose of this treatment is to help people maintain more balance lifestyle. CBT includes both the cognitive elements and the behavioural elements (Raylu & Oei, 2004). According to the definition given by the American Psychiatric Association, “cognitive behavioural therapy (CBT) helps people identify and change thinking and behavioural patterns that are harmful or ineffective by replacing them with more accurate thoughts and functional behaviours.” For pathological gamblers, CBT helps to minimize their excessive gambling behaviours by teaching them useful skills and techniques, that incorporate both the behavioural and cognitive elements.

Cognitive Restructuring

Aaron Beck, who was an American psychiatrist and professor in the field of mental health, conducted research investigating the effectiveness on cognitive behavioural therapy. He suggested that people with negative core beliefs are at a higher chance of developing mental disorder, compared to people with positive core beliefs (Rector, 2010). Studies have found that cognitive restructuring in CBT can significantly reduce severe gambling symptoms among problem gamblers (Ladouceur et al., 1989; Gaboury & Ladouceur, 1990).

Cognitive restructuring is the main component in CBT treatment. It involves the use of guided discovery to guide patients into understanding their own cognitive distortion and to assess the negative consequences of gambling. This process helps patients develop a sense of self-efficacy that increase their awareness towards thoughts and feelings, which increase their perceived control over gambling behaviours (Xie, 2007). The basic steps of cognitive restructuring technique include learning to identify cognitive distortions, evaluate and question the negative automatic thoughts occur in clients, and change the distorted beliefs or thoughts with more adaptive and positive ones (Raylu & Oei, 2010). During cognitive restructuring, the CBT therapist helps the client to realize the relationship between thoughts, moods and behaviours, identify specific negative core beliefs, and evaluate and question those thinking errors. The main tool used by CBT therapist is the thought record. It's a type of homework, given by CBT therapist for client to complete between sessions in order to record their thoughts. The aim of this record is to teach clients ways to identify and challenge different thinking errors in day-to-day life (Rector, 2010).

Coping Methods

Coping methods is used by most therapists, to work together with patients by identifying specific ways that can effectively control their gambling urges when there are changes occurring in patient's living environments. Therapists work together with patients to prevent any possible triggers that may predispose them to the risk of developing gambling problems (Yang & Ng, 2016). Self-monitoring is one basic coping skill, which often used during basic CBT treatment. It helps client to stay focus and aware of their own problem, so that they can be able to take actions to control their behaviours. For example, problem gamblers learn to use thought records to keep track of their negative automatic thoughts occur day by day. Behavioural activation is another important component, which clients learn to find hobbies that are more pleasurable and enjoyable, such as physical exercise or yoga, instead of engaging in gambling activities. Other techniques in CBT, such as progressive muscle relaxation and diaphragmatic breathing also help clients to relieve stress and anxiety, associate with excessive gambling behaviours (Rector, 2010).

Other Support

Apart from CBT, support from family members is also crucial for problem gamblers facing with severe gambling problems. Psychoeducation aims at teaching family members knowledge of pathological gambling,

including any predispose triggers, gambling symptoms and age of onset of the disorder. So that family members gain the knowledge and skills to help prevent relapse and better at supporting or managing client's gambling problems in the future (Yang, 2013). Another support apart from psychoeducation is group therapy. Gamblers Anonymous is an organization set up in America in 1950. This organization aims at reducing gambling desires or urges among problem gamblers by relying the support from previous successful clients joining this organization. During the therapeutic session, problem gamblers sit in groups sharing their experience of symptoms, feelings of gambling behaviours, and how to overcome such difficult times. Although Gamblers Anonymous seems to be effective for treatment of problem gambling in the adult population, there is insufficient evidence supporting this type of intervention has high efficacy in preventing rates of relapse for pathological gambling in the long term.

Research question

This review investigates “Does cognitive behavioural therapy acts as an effective psychosocial intervention for treatment of pathological gambling among adult problem gamblers?”

Aim and Purpose of the Review

Between 1998 and 2010, Professor Anderson and his colleagues at Monash University published an article in “An International Conference on Public Welfare and Gambling Industry in Beijing”. He believed that cognitive behavioural therapy is the most effective treatment of pathological gambling, and it's crucial for pathological gamblers to receive this treatment in order to prevent rates of relapse in the future (Dr. Chan Chi Chuen, 2014). Ladouceur and colleagues taught four young problem gamblers useful behavioural techniques in traditional CBT treatment. Results suggested that young people showed a higher level of self-efficacy in controlling their gambling behaviours, which reduce their chances of developing gambling problems. Researchers also found that three out of four individuals stop their gambling behaviours completely after 6-month follow-up. For all the treatments of problem gambling, CBT received the greatest amount of supporting evidence for its efficacy in treatment of pathological gambling among the adult population (Toneatto & Ladouceur, 2003). Therefore, the aim of our review is to examine the effectiveness or efficacy of cognitive behavioural therapy as a treatment of pathological gambling among problem gamblers in the adult population.

Methods

In this paper, we carried out a systematic review exploring the effectiveness of cognitive behavioural therapy for adult problem gamblers. The findings will be summarized and presented in the form of a narrative synthesis. The reason for using a systematic review is to summarize and critique data in both valid and reliable way. The papers selected in this review were collected using four databases, including PubMed (Medline), PsycInfo, Cochrane's central register of controlled trials (CENTRAL) and Embase.

Selection Criteria

A list of inclusion and exclusion criteria used for selection, included characteristics such as population, intervention, comparison, outcome(s) of interest and study design. This framework is also known as the PICOS.

Population group in this study was individuals diagnosed with problem gambling, which the symptoms were classified within the DSM-IV criteria (APA, 2000). Individuals from both inpatient and outpatient groups were included. People with gambling problems, who were volunteers within the society were also included. For the age of participants in this review, we selected only the adult population. Participants under the age of 18 were excluded from this review. It's common for problem gamblers diagnosed with other mental disorders, such as depression, psychosis, suicidal ideation. However, this review included individuals diagnosed with pathological gambling only. Problem gamblers with co-morbid mental health symptoms or behaviours were excluded from this review.

The intervention includes in this review was cognitive behavioural therapy. In order to focus on the effectiveness of CBT on adult problem gamblers, different forms of cognitive behavioural therapy were included in this review. However, papers that integrate or combine CBT with other forms of therapy were excluded.

This review looks at any comparative studies that explore the effectiveness of CBT on problem gambling. The primary outcome for this study was treatment efficacy. Studies that measured frequency of gambling, amount of money loss by gambling, severity of gambling symptoms and psychological distress were included in this review. These four factors are considered to be the common outcome variables measuring the effectiveness of treatment for gambling disorder.

This study included papers with the use of quantitative methods. Randomized control trials (RCTs) were included in this review, as this type of study uses random assignment of participants, that increases the internal validity and minimize selection bias in the selected studies. Qualitative studies and case studies were excluded from this review. The aim of our review is to investigate effectiveness of CBT for treatment of problem gambling by comparing participants in the CBT group versus participants in the control group. Therefore, study design involving qualitative studies or case studies were not suitable in this case. Also, findings from case studies may not be generalizable to the wider population in our review. Below presents with the summary of the selection criteria used in our review (See Table 1).

Table 1. Inclusion and Exclusion Criteria based on PICOS framework

Inclusion Criteria	Exclusion Criteria
Population (P)	-Adults with a diagnosis of pathological gambling (DSM-IV criteria)
	-Individuals under 18 years old -Individuals diagnosed with

	-Outpatient and inpatient groups -Community volunteers	comorbid mental disorder (psychosis, depression, anxiety) -Individuals with suicidal thoughts and behaviours
Intervention (I)	Cognitive-behavioural therapy Different forms: -Individual CBT -Group CBT -Internet-based CBT -Self-help CBT program -Culturally adapted CBT	Cognitive-behavioural therapy combined with another therapy
Comparison (C)	Any comparative studies	Studies without comparison group
Outcome (O)	Papers that report at least one of the following outcomes: Frequency of gambling, amount of money loss by gambling, gambling severity, psychological distress	Papers that do not report frequency of gambling, amount of money loss, gambling severity or psychological distress as outcomes
Study Design (S)	Quantitative studies only -include randomized controlled trials (RCTs)	Qualitative studies and case studies

Search Strategy

Below is our search plan that we proposed in the pilot study. For the search terms that we used, the full content was shown below (See table 2). In terms of therapeutic treatment, a list of key words used for searching include cognitive behavioural therapy, CBT, cognitive-behavioural therapy and cognitive behavioral therapy. In terms of gambling disorder, a list of key words used in the search process include problem gambling, pathological gambling, gambling addiction and disordered gambling.

Table 2. The combination of search terms used for each database

Database	Search terms used
PubMed	Cognitive-behavioural therapy OR CBT OR cognitive behavioural therapy AND problem gambling OR pathological gambling OR gambling disorder
PsycInfo	Cognitive behavioral therapy OR cognitive behavioural therapy OR cbt AND problem gambling OR pathological gambling OR gambling addiction OR disordered gambling
Cochrane Library	“Cognitive behavioural therapy” OR

(CENTRAL)	“cognitive behavioral therapy” OR “cognitive-behavioural therapy” AND “problem gambling” OR “pathological gambling”
Embase	‘Cognitive behavioral therapy’ OR ‘cognitive behavioural therapy’ OR ‘cbt’ AND ‘problem gambling’ OR ‘pathological gambling’

Data Extraction

We independently assessed all papers found in the search process according to the inclusion and exclusion criteria. The screening process made up of three stages. During the first stage, We screened all the titles and abstracts that were relevant to the selection criteria. During the second stage, the screening involved the whole text from all relevant papers. Only the papers that relate to the inclusion criteria were selected. During the process of screening and selection, We recorded the extracted data on a log or diary.

Below is a list of information, presenting all the extracted data:

- a) Title, author, year, place of study, study design
- b) Participant’s age, gender, diagnosis
- c) Measures or instruments the author(s) used
- d) Quality criteria
- e) Therapeutic intervention (CBT)
- f) Comparison group (Treatment-as-usual or control group)
- g) Outcomes: Treatment efficacy, including gambling frequency, amount of money loss by gambling, severity of gambling symptoms and psychological distress
- h) Effect size between intervention and treatment efficacy

Quality Assessment

We conducted this review by assessing journal articles using a quantitative method. We focused on selecting studies with quantitative design. The quality of the selected studies was assessed using the Effective Public Health Practice Project (EPHPP) for quantitative studies (2015). The EPHPP assessment tool involves examining items, such as selection bias, blinding, intervention integrity, rate of withdrawal and so on.

Data Synthesis

After the relevant papers were extracted, the data were grouped together in the form of a table, presenting with information on participants, intervention, outcome(s), study design, comparator and key findings. Details of information was shown in Table 3 below. The selected studies were presented using a narrative synthesis to

draw inferences on how the findings relate to each other and fit into the overall aim of this review. Clinical implications, strengths, limitations and future direction of research were also considered in the discussion section.

Results

A systematic review was carried out across four databases (PubMed, PsycInfo, Cochrane’s central register of controlled trials {CENTRAL} and Embase). The searches retrieved 51975 results. Details of how the papers selected at each stage and the search results are shown below (See Figure 1). A total of 7 studies were selected for this review (Carlbring et al, 2009; Oei et al., 2018; Toneatto & Dragonetti, 2008; Casey et al., 2017; Harris & Mazmanian, 2016; Sylvain et al., 1997; Wong et al., 2015).

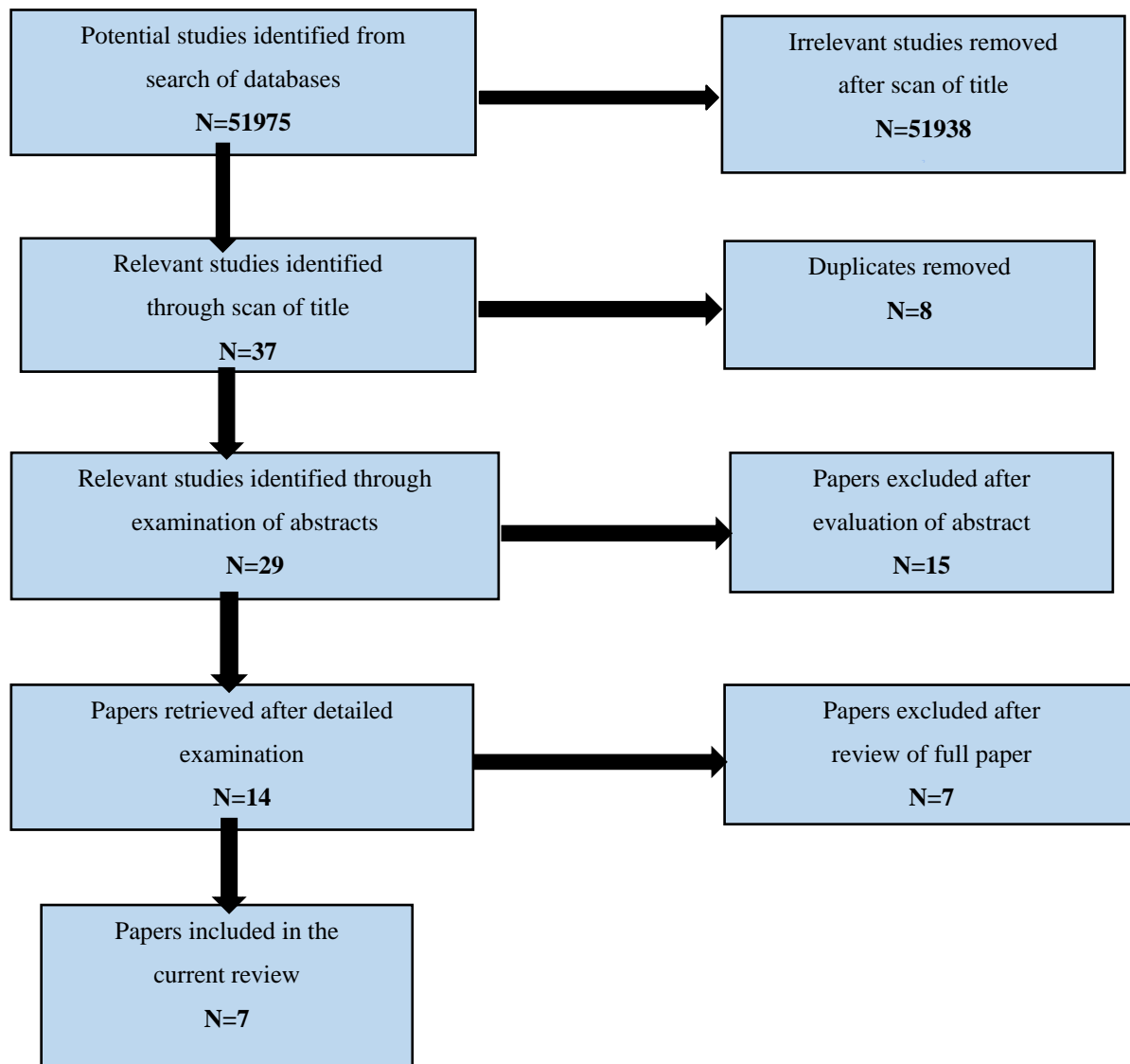


Figure 1. Flowchart illustrating details of the study selection process

Participant Characteristics

There were 688 participants took part across seven quantitative studies, with the mean age between 18 years and 78 years. All participants were diagnosed with pathological gambling according to the DSM-IV criteria (APA, 2000). All studies excluded participants diagnosed with co-morbid mental disorders and people who decided to withdraw from the studies. In terms of recruitment of participants, Carlbring et al. (2010) recruited patients from outpatient clinic or hospital. Toneatto & Dragonetti (2008) and Sylvain, Ladouceur & Boisvert (1997) recruited participants through referrals from mental health clinics or professionals. Wong et al. (2015) recruited participants from the CAGCC, which is a counseling organization that deals with addiction and gambling problems in Hong Kong. For the rest of the studies, participants were either recruited from the Internet, radio advertisement or newspaper advertisement. Participants were selected from different cultures and ethnicities, such as Swedes, Australian, North American, White, Aboriginal, Hispanic, Black, Caucasian and Chinese.

Intervention Characteristics

All participants received cognitive behavioural therapy (CBT) as their main form of intervention regarding treatment of pathological gambling. Different forms of CBT, including cognitive behavioural group therapy (CBGT), self-help cognitive behavioural treatment program (SHCBT) and internet-based cognitive behavioural therapy (I-CBT) were also included in this review.

Cognitive Behavioural Group Therapy (CBGT)

Carlbring et al. (2010), Harris & Mazmanian (2016) used cognitive behavioural group therapy as their intervention for treatment of pathological gambling among participants. For each of the studies, CBGT lasted for 90 minutes per session and patients were required to do follow-up measures at 3 to 6 months after post-treatment. CBGT mainly involved components such as cognitive restructuring, coping methods, psychoeducation and relapse prevention. Harris & Mazmanian (2016) added the component of motivational interviewing (MI) into the traditional treatment of CBGT, which enhances the overall treatment efficacy among patients.

Carlbring et al. (2010) incorporated behavioural techniques such as stimulus control, imaginal desensitization, response prevention and social skills training into treatment of pathological gambling. Social skill training aims at teaching patients establish new relationships with significant others, which reduce the chances of relapse after post-treatment.

Self-Help Cognitive Behavioral Treatment (SHCBT) program

Oei, Raylu & Lai (2018) used a self-help CBT program including cognitive correction, problem-solving skill training and relapse prevention as the main components for treatment of problem gambling among volunteers

presenting with symptoms of gambling addiction. The self-help manual teaches problem gamblers ways to apply techniques of CBT into their daily lives. The manual was sent to participants via email, and they were asked to read through the chapters within 7 weeks. They were also asked to complete the exercises at the end of each chapter. Feedback or evaluation about performance was given to participants after each session.

Internet-Based Cognitive Behavioural Therapy (I-CBT)

Casey et al. (2017) used internet-based cognitive behavioural therapy as the intervention for pathological gambling among participants. The I-CBT program used by Casey et al. (2017) consisted of six therapeutic sessions, aimed at reducing participant's gambling behaviours by combining both cognitive and behavioural techniques, such as identifying gambling triggers, cognitive restructuring, imaginal exposure, problem-solving and relapse prevention. Exercises and feedback were provided to participants throughout the treatment program.

Comparators

The most commonly used comparator was the control group or treatment as usual (TAU) group. Control group is the group of participants without receiving cognitive behavioural therapy. Treatment as usual group involved motivational interviewing (MI), 12-Step therapy (12STEP), Internet based monitoring, feedback and support (I-MFS) and individual counseling services (Carlbring et al., 2010; Toneatto & Dragonetti, 2008; Casey et al, 2017; Wong et al, 2015). Three studies used waitlist control groups as comparators to cognitive behavioural therapy (Oei et al, 2018; Harris & Mazmanian, 2016; Sylvain et al., 1997).

Outcomes

Gambling Frequency

Most studies assessed gambling frequency by calculating the number of gambling sessions that participants involved after post-treatment. Oei et al (2018) (OR=0.51, $p < 0.001$, partial $\eta^2 = 0.56$) ; Toneatto & Dragonetti (2008) $F(1,77)=31.36$, $p < 0.001$, Cohen's $d=0.54$; Harris & Mazmanian (2016) $F(2, 38)=42.37$, $p < 0.001$, partial $\eta^2 = 0.625$; Sylvain et al (1997) and Wong et al (2015) ($t = 2.22$, $p < 0.04$, Cohen's $d=0.57$), all of these studies found a significant reduction in gambling frequency after receiving cognitive-behavioural therapy at post-treatment compared to TAU or controls. Out of all studies, only a study from Casey et al (2017) found an insignificant difference in gambling frequency among participants receiving Internet-based CBT compared to TAU.

Amount of Money Spent in Gambling

Toneatto & Dragonetti (2008) used the Time-Line Follow Back method to assess dollars expended by gambling in 30 days prior to the baseline, posttreatment and one-year follow up, they found a significant reduction in

gambling expenditures for the CBT group compared to TAU at post-treatment, $F(1, 71)=192.98$, $p<0.0001$, effect size=0.91; and a significant reduction between post-treatment and one-year follow-up $F(1, 71)=329.30$, $p<0.0001$, effect size=0.85. However, two studies from Casey et al. (2017) and Sylvain et al. (1997) found insignificant differences in amount of money spent by gambling among participants receiving CBT compared to TAU or waitlist control group.

Gambling Severity

Both Toneatto & Dragonetti (2008) and Harris & Mazmanian (2016) used the DSM-IV-TR criteria for Pathological Gambling to assess the severity of gambling problem. Toneatto & Dragonetti (2008) found a significant reduction in the number of DSM symptoms among treatment group compared to TAU between baseline and one-year follow-up, $F(1,79)=145.24$, $p<0.0001$. For Harris & Mazmanian (2016), results were analyzed using one-way MANOVA and one-way repeated measure ANOVAs, they found a significant reduction in DSM-IV symptoms of pathological gambling between CBGT and waitlist comparison group at post-treatment, $F(1, 24)=10.38$, $p=0.004$, partial $\eta^2=0.302$; and a significant time effect on DSM-IV symptoms between post-treatment and 3-month follow-up among CBGT compared to waitlist control $F(1, 31)=69.28$, $p<0.001$, partial $\eta^2=0.759$.

Sylvain et al. (1997) and Wong et al. (2015) used the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987), assessing the severity of gambling problems among pathological gamblers. For Sylvain's study, results were analyzed using MANOVA, study revealed a significant interaction effect for treatment group and controls between pre-treatment, post-treatment and 6-month follow-up $F(1,26)=60.18$, $p<0.01$. For Wong's study, results were analyzed using paired sample t tests, a significant reduction in SOGS scores was found among participants receiving CBT compared to participants in control conditions for both pre-treatment and post-treatment ($t=2.96$, $p<0.01$ Cohen's $d=0.76$).

Oei et al. (2018) used the Canadian Problem Gambling Index (CPGI; Ferris & Wynne 2001) assessing the severity of pathological gambling symptoms based on DSM-IV criteria among participants based on a three-point Likert scale. They found a significant reduction in gambling symptoms for participants in SHCBT group compared to waitlist controls at pre-treatment and post-treatment ($OR=0.6$, $p<0.01$, partial $\eta^2=0.30$). However, two studies from Carlbring et al. (2010) and Casey et al. (2017) found insignificant differences in the severity of gambling symptoms among participants receiving cognitive-behavioural group therapy versus participants receiving motivational interviewing.

Psychological Distress

Oei et al. (2018) used the DASS-21 to assess participant's levels of distress after completing self-help CBT program. Results showed a significant reduction in depression scores ($OR=0.6$, $p<0.01$, partial $\eta^2=0.38$); anxiety scores ($OR=0.4$, $p<0.01$, partial $\eta^2=0.34$); and stress scores ($OR=0.7$, $p<0.01$, partial $\eta^2=0.37$) among participants completing SHCBT compared to waitlist controls at pre-treatment and post-treatment. Casey et al.

(2017) used the Depression Anxiety Stress Scale-21 (DASS-21; Lovibond & Lovibond 1995) assessing self-report levels of depression, anxiety and stress among participants completing I-CBT versus I-MFS conditions. Results showed a significant reduction in stress scores among participants completing the I-CBT condition between pre-treatment and post-treatment ($p < 0.001$, 95% CI -1.95- -0.53). However, insignificant differences were found in both depression and anxiety scores among participants completing the I-CBT condition versus the I-MFS condition. Three studies (Carlbring et al, 2010; Harris & Mazmanian, 2016; Wong et al, 2015) found insignificant differences in psychological distress among participants in treatment group compared to TAU or control. Below showed the main characteristics of the seven selected studies in our review (See table 3).

Table 3. Showed The Main Characteristics of The Selected Studies

Study	Aims	Population	Intervention	Comparator	Outcome
Carlbring et al. (2010)	To compare the effectiveness of MI, CBT group therapy and control group for patients with gambling problems	-Diagnosis of pathological gambling according to NORC DSM-IV screen for gambling problems -150 patients recruited from outpatient clinic at Karolinska Institute -native Swedes	Cognitive Behavioral Group Therapy (CBGT) -manualized -include: imaginal desensitization, response prevention, cognitive restructuring, coping methods and psychoeducation	Motivational interviewing (MI) -one-to-one -aim is to encourage patient to make changes about gambling -evaluate the consequence of gambling	Gambling Severity (NODS) non-significant in NODS scores between CBGT and MI at post-treatment, 6 and 12 months follow-up Psychological Distress (BDI-2) -non significant in depression scores between CBGT and MI at post treatment, 6 and 12 months follow-up
Oei, Raylu & Lai (2018)	To compare the effectiveness of a Self-Help CBT (SHCBT) program with a waitlist control	-Age over 18 years -110 community volunteers presented with gambling	Self-help CBT manual (SHCBT) include -cognitive correction, problem-solving skills training,	Waitlist control condition -6 weeks	Gambling severity (CPGI) -significant reduction between SHCBT and controls Gambling

	for problem gamblers	problems -Participants recruited from radio advertisement, newspaper and helpline -Origin: Queensland	relapse prevention, -readings and evaluation forms		Frequency and Amount of money gambled per day -significant reduction between SHCBT and controls Psychological Distress (DASS) -significant reduction in depression, anxiety and stress scores between SHCBT and controls
Toneatto & Dragonetti (2008)	To compare the effectiveness of CBT with 12-step therapy for treatment of problem gambling	-126 participants recruited via newspaper advertisements and mental health clinics -Diagnosis of pathological gambling according to DSM-IV criteria -Origin: North America	Cognitive behavioral Therapy -manualized -focus on functional analysis of problem gambling, problem solving, stimulus control and cognitive restructuring	12-Step therapy (12STEP) - 5 steps to the program 1) believes we have no control over gambling 2) believes a Power help to change our erroneous thinking 3) decides to seek help from that Power 4) Search for meanings and	Frequency of gambling -A significant reduction between baseline, post-treatment and one year follow-up Amount of money gambled -A significant reduction between baseline, post-treatment and one year follow-up Gambling

				morals in lives	severity
				5) Take responsibility for the consequence of gambling	-significant time effect was found between baseline and one-year follow-up
Casey et al. (2017)	To compare the efficacy of internet based	-Age over 18 years	Internet-based cognitive behavioural therapy (I-CBT)	Internet-based monitoring, feedback and support (I-MFS)	Gambling Urges (GUS)
Randomized Controlled Trial	cbt (I-CBT) with monitoring, feedback and support (I-MFS) for treatment of problem gambling	-Diagnosis of pathological gambling according to DSM-IV criteria -174 participants recruited via Internet, newspaper and radio advertisement -Origin: Australia	-each session consists of exercises and feedback -include, enhance awareness of triggers to gambling, behavioural strategies to control gambling, cognitive correction, exposure and relaxation techniques, problem-solving and relapse prevention	-include only monitor gambling behaviours, providing feedback and supportive statements -each session lasts for 5 to 10 mins	-significant reduction in gambling urges for participants in the I-CBT condition compared to the I-MFS condition Amount of Money gambled (SOGS) -non-significant differences in amount of money gambled for I-CBT group than the I-MFS condition Psychological Distress (DASS) -significant reduction in stress for participants in the I-CBT condition compared to

					I-MFS condition
Harris & Mazmanian (2016)	To explore the efficacy of group CBT for Internet	-Age between 22 to 52 years	Cognitive behavioural therapy (CBGT)	Waitlist comparison group	-Gambling severity (DSM-IV-TR Criteria for Pathological Gambling)
Randomized Controlled Trial	gamblers	-Diagnosis of pathological gambling according to DSM-IV criteria	-includes motivational interviewing, behavioural interventions, cognitive interventions and relapse prevention	-received CBT treatment after 12 weeks	-significant reduction in gambling symptoms at post-treatment for the CBGT compared to waitlist comparison group
		-32 Internet gamblers	-11 group sessions and 1 individual session	-completed post-treatment measures and follow-up measures at 3 months	-Gambling frequency (Gambling-Related Questions)
		-Participants identified as White, Aboriginal, Hispanic or Black	-90 minutes per session		-significant reduction in participating gambling sessions at posttreatment for CBGT compared to the waitlist comparison group
			-follow-up questionnaires after three months post-treatment		Psychological distress (SCL-90-R)
					-non-significant difference in

					depression and anxiety scores between treatment and waitlist comparison groups
Sylvain, Ladouceur & Boisvert (1997)	To examine the efficacy of CBT with a waitlist control for treatment of pathological gambling	-Diagnosis of Pathological gambling according to DSM-III-R -58 gamblers -recruited via advertisements or referred from mental health professionals -Caucasian gamblers	Cognitive behavioral treatment (CBT) -one to two sessions per week -each lasted for 60 to 90 minutes -include, cognitive correction, problem-solving training, social skills training and relapse prevention	Waitlist control group -participants received treatment in the upcoming 4 months -contacted regularly by the therapist via telephone	-Gambling Frequency -significant reduction in the number of hours spent gambling for the treatment group compared to control group -Amount of money gambled Non-significant differences between treatment and control groups -Gambling Severity (SOGS) -significant reduction in SOGS score among the treatment group compared to controls
Wong et al. (2015)	To test the efficacy of a culturally adapted group CBT	-Age between 18 to 65 years -Diagnosis of	Cognitive behavioral treatment (CBT) -3 hours per session	Individual counseling services - delivered by counselors	-Frequency of gambling -a significant reduction in the frequency of

Trial	for problem gamblers in China	problem gambling according to the SOGS	-include, identifying factors related to gambling urges, faulty beliefs about gambling, feelings and emotions, relapse prevention -using both cognitive and behavioural strategies	working at CAGCC (every 1 to 3 weeks) -include, debt counseling, grief counseling, family or marital counseling and crisis intervention	gambling among CBT compared to individual counseling -Gambling severity (SOGS) -A significant decrease in gambling severity among CBT compared to counseling -Psychological Distress (DASS) -non-significant differences in changes of anxiety, depression and stress levels among CBT compared to counseling
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Assessing Quality

The Effective Public Health Practice Project (EPHPP) for quantitative studies (2015) is used as a tool to assess the quality of seven quantitative studies that we selected for this review. In terms of validity, most studies (Carlbring et al, 2010; Oei et al, 2018; Toneatto & Dragonetti, 2008; Casey et al, 2017) demonstrating high external validity, from which results remain highly significant and be able to generalize to the wider population. However, there are some studies, (Harris & Mazmanian, 2016; Sylvain et al, 1997; Wong et al, 2015) demonstrating low external validity due to small sample sizes.

Three studies (Oei et al, 2018; Harris & Mazmanian, 2016; Sylvain et al., 1997) randomly assigned participants to either the treatment group or control group. Four studies (Carlbring et al, 2010; Toneatto & Dragonetti, 2008;

Casey et al, 2017; Wong et al, 2015) compared efficacy of treatment group with Treatment as usual (TAU) group. Study of Carlbring (2010) failed to provide reason as to why participants were not blinded to both treatment and control conditions.

This EPHPP quality assessment tool divides into two sections. The first section focuses on component ratings, including selection bias, study design, confounders, blinding, data collection method, withdrawals or dropouts, intervention integrity and analyses. The reader gives rating to each component using a rating scale from 1 to 3, which 1 represents strong and 3 represents weak. The second section is the global rating, which calculates the average rating for each component above. A basic overview of the component ratings in this quality assessment tool relative to the seven quantitative studies is shown in Table 3 below (See table 3).

Table 4. Ratings of Different Components Based on Each Study

	Strong	Moderate	Weak
A) Selection Bias	1	2	3
	Toneatto & Dragonetti, 2008	Harris & Mazmanian, 2016	Oei et al, 2018
			Carlbring et al, 2010
			Casey et al, 2017
			Sylvain et al,1997
			Wong et al, 2015
B) Study Design	1	2	3
	Carlbring et al, 2010	Oei et al, 2018	Toneatto & Dragonetti, 2008
	Casey et al, 2017	Harris & Mazmanian, 2016	
		Sylvain et al, 1997	
		Wong et al, 2015	
C) Confounders	1	2	3
		Wong et al, 2015	Oei et al, 2018
			Toneatto & Dragonetti, 2008

Carlbring et al, 2010

Casey et al, 2017

Harris &
Mazmanian, 2016

Sylvain et al, 1997

D) Blinding	1	2	3
	Harris & Mazmanian, 2016	Oei et al, 2018	Casey et al, 2017
		Toneatto & Dragonetti, 2008	Sylvain et al, 1997
		Carlbring et al, 2010	Wong et al, 2015
E) Data Collection Method	1	2	3
	Carlbring et al, 2010	Toneatto & Dragonetti, 2008	Oei et al, 2018
	Casey et al, 2017	Sylvain et al,1997	Harris & Mazmanian, 2016
		Wong et al, 2015	
F) Withdrawals and dropouts	1	2	3
	Oei et al, 2018	Toneatto & Dragonetti, 2008	Carlbring et al, 2010
	Casey et al, 2017	Harris & Mazmanian, 2016	Sylvain et al, 1997
			Wong et al, 2015

Discussion

Cognitive behavioural therapy is the most commonly used psychosocial intervention for treatment of pathological gambling. Through the use of cognitive restructuring, CBT teaches patients become aware and

change their negative automatic thoughts towards abnormal gambling behaviours. It teaches patients various ways to regulate their emotions when feeling gambling is out of their control. Through the use of functional analysis, CBT helps patients to evaluate both the positive and negative impacts that gambling brings into their lives. CBT also builds up patient's self-confidence and self-efficacy to control their gambling desires or urges, that often preoccupied within their minds.

This present systematic review explores the overall efficacy of using cognitive behavioural therapy in treatment of pathological gambling among adult problem gamblers. After completing the search process, a total of seven quantitative studies were selected for this review (Carlbring et al., 2010; Oei et al., 2018; Toneatto & Dragonetti, 2008; Casey et al., 2017; Harris & Mazmanian, 2016; Sylvain et al., 1997; Wong et al., 2015).

Conclusion of Results

Most research provided evidence that CBT is effective at reducing both gambling frequency and severity of gambling symptoms among individuals suffering with pathological gambling (Oei et al., 2018; Toneatto & Dragonetti, 2008; Harris & Mazmanian, 2016; Sylvain et al., 1997; Wong et al., 2015).

However, this review found that cognitive behavioural therapy only demonstrated a moderate treatment effect for reduction in amount of money gambled and levels of psychological distress among individuals diagnosed with pathological gambling. Out of all seven studies, two studies showed a significant decrease in amount of money gambled among participants after receiving cognitive behavioural therapy (Oei et al, 2018; Toneatto & Dragonetti, 2008). Two studies demonstrated significant decrease in levels of psychological distress among participants after receiving cognitive behavioural therapy (Oei et al, 2018; Casey et al, 2017).

Strengths of Included Studies

One of the strengths of this review is the recruitment of participants from different cultural backgrounds, such as native Swedes, Australians, Americans, Caucasian and Chinese. Including participants from a wide range of ethnic backgrounds enhances the generalizability of our overall findings, which our results can represent to the wider population across different cultural groups.

Another strength of this review is the focus on specific target population in our inclusion and exclusion criteria. In this review, we only include adult diagnosis with pathological gambling, according to the DSM-IV criteria. Therefore, individuals under 18 years old, were not included in this review. Also, we aim to explore the efficacy of cognitive behavioural therapy as a treatment of pathological gambling. Therefore, we exclude people who diagnosed with comorbid mental disorder and people with suicidal thoughts or behaviours. The focus on specific target population not only enhance both the reliability and validity of research findings in area of pathological gambling, it also expands our knowledge and understanding of the research question. This makes it easier to look into appropriate studies and outcomes, that associate with our aim and purpose of research.

Studies with randomized control trials (RCTs) were included in our review. Selecting quantitative studies, especially RCTs lead to highly significant results for treatment efficacy among participants, because the study outcomes only conclude cause and effect relationship (Oei et al, 2018; Toneatto & Dragonetti, 2008; Carlbring et al, 2010; Casey et al, 2017; Harris & Mazmanian, 2016; Sylvain et al, 1997). The random assignment of participants or randomization ensures that the treatment effects of the selected studies are less likely to be influenced by selection bias or confounder variables among participants (Oei et al, 2018; Carlbring et al, 2010; Casey et al, 2017; Sylvain et al, 1997; Wong et al, 2015). Most authors didn't find significant differences between treatment group and non-treatment group on any demographic variables, such as gender, age of onset of the disorder and education level between participants.

Limitations of This Review

One issue of this review is the lack of statistical significance in some of the selected studies. Recruitment of small number of participants often result in the lack of statistical power. Three studies with small sample size, found non-significant differences in both amount of money gambled and psychological distress after receiving CBT (Harris & Mazmanian, 2016; Sylvain et al, 1997; Wong et al, 2015). Most studies demonstrated a moderate rate of dropout among participants in treatment or control groups (Toneatto & Dragonetti, 2008; Harris & Mazmanian, 2016), which also suggested that the overall findings of those studies tend to be less significant. Studies with large sample sizes often demonstrate significant results for reduction of psychological distress (Oei et al., 2018; Casey et al., 2017), compared to studies with small population, following the use of Internet-based CBT or culturally adapted CBT (Harris & Mazmanian, 2016; Wong et al., 2015).

Cultural perception is another important factor, that needs to be considered as a result of the lack of statistical significance among some of the selected studies. According to the findings of all selected studies, some insignificant results may due to the fact that participants come from different cultural backgrounds. People from different cultural backgrounds often have different cultural beliefs and perceptions towards understanding problem gambling. The symptoms of gambling disorder may also differ between cultures. For cultures, which hold highly permissive beliefs towards gambling, people may be less likely to seek help through psychosocial interventions. As a result, some studies demonstrated high level of dropouts among participants (Carlbring et al, 2010; Harris & Mazmanian, 2016; Sylvain et al, 1997).

In this review, some quantitative studies failed to provide evidence of the use of blinding (Casey et al, 2017; Sylvain et al, 1997; Wong et al, 2015). The lack of blinding suggested that most authors tend to overestimate the treatment effects of cognitive behavioural therapy when conducting their research, this often create the issue of bias among participants or researchers.

Evaluation of Selection Criteria and Search Process

This review covers different types of cognitive behavioural therapy, such as internet-based CBT, cognitive

behavioural group therapy (CBGT) and culturally adapted CBT. Involving the use of different CBT makes our overall findings more representative and generalizable to the target population, that fit in with our purpose and aim of research.

This review includes studies of participants from diverse cultural backgrounds, which enhances the validity and reliability of the overall findings. However, most participants were actually recruited from the Western cultures, which also create the issue of cultural bias. We aim to select a large number of relevant studies according to our inclusion and exclusion criteria. However, we excluded a large number of irrelevant studies after scanning the title. This explains that the search terms that we introduced in the search strategy section may not be precise enough for the selection of large number of relevant studies. Only a small number of relevant papers (n=7) were selected at the end of the search process.

Direction for Future Research

Grant et al (2012) found that most studies investigating efficacy of drug treatment for pathological gambling recruited small number of participants, findings from those studies can't be generalize to the wider population. He suggested that recruiting larger sample size in future research is necessary, to enhance the statistical power of research, for the overall findings to reach its significance (Grant et al, 2012). In future, there is also a need to include some grey literature during the search process in systematic review, so as to increase the number of selected papers, that are relevant and fit into the overall aim and purpose of research in area of treatment of pathological gambling.

For treatment of pathological gambling, CBT itself is not sufficient. For pathological gamblers with a large number of symptoms, motivational interviewing (MI) may involve to reduce patient's ambivalence and enhance their self-efficacy to stop unhealthy gambling behaviours. Other social support, such as family psychoeducation, group therapy and medication, are also believed to be effective in the treatment of pathological gambling when combined with CBT. Therefore, future research focusing on the effectiveness of CBT combined with other forms of therapy is necessary, in order to investigate the outcomes of gambling symptoms among patients diagnosed with severe gambling problems.

Implication of Cognitive Behavioural Therapy on Chinese Culture

Although CBT is a commonly used intervention for treatment of pathological gambling in Western cultures, there are only a few randomized control trials (RCTs) carried out in Chinese cultures. Wong and his colleagues carried out a RCT looking at the effectiveness of CBT among Chinese problem gamblers. The authors focused on intervention, known as a 'culturally attuned CBT program'. This program included components of motivational interviewing, identifying gambling triggers, cognitive restructuring, learning behavioural coping strategies and relapse prevention. Participants were Chinese problem gamblers in Hong Kong. They were randomly assigned to either the CBT group or the control group. Participants in the control group received

individual counseling sessions. Results indicated that participants in the CBT group showed a greater reduction in gambling behaviours compared to participants in the control group (Wong et al., 2015). This indicated that CBT demonstrates a high efficacy for treatment of problem gambling across individuals from both Western and non-Western cultures.

However, in the Chinese society, problem gambling tends to cause stigma, which creates a sense of shame or embarrassment to Chinese people (Lin, 2002). This often leads to them denying about their gambling problems and are unwilling to seek help from mental health professionals. Chinese problem gamblers often feel ashamed of sharing their gambling problems in front of their family members, even during their counseling sessions. They believe that this behaviour is a disgrace to their family members. Short-term interventions, such as internet-based CBT and telephone motivational interviewing were found to be effective for treatment of distorted gambling among Chinese problem gamblers.

The multimodal approach, combining both group CBT and GA meetings was developed, specifically designed on treatment of problem gamblers in China. This approach centers a lot of attention on the behavioural aspects of CBT rather than the cognitive aspects. The main components in this approach are motivational interviewing, psychoeducation, behavioural coping strategies, assertive training, cognitive restructuring, positive living skills and relapse prevention. Nowadays, it's becoming the most effective intervention for treatment of problem gambling across the Chinese population (Chan et al., 2019).

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Education Value Chain Analysis: A Conceptual Integrated Framework for Learning Loss Recovery and Acceleration

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Abstract: Recognizing the limitations of the existing frameworks and models applied to estimate the learning loss caused by COVID-19 across the world by different studies, and the urgent need for estimating such loss at the different education levels, this paper, employs the Education Value Chain Analysis (EVCA) approach as a new paradigm, attempts to develop and examine a more comprehensive and practical framework that would assist estimating the learning loss, determine its position(s) in the education system and the root causes behind its occurrence. The proposed framework seems to be superior, compared to the existing ones, in estimating learning loss. That would provide sufficient information to help in introducing effective measures and interventions to deal with such loss. For example, the framework would assist in estimating the loss that occurs within the main components of the education system (i.e., Input, process, and outcome). Besides, it helps estimate the loss of different education levels. In addition, the information provided by the framework would help determine the root causes of the learning loss. Hence, provides a checklist of the policy actions, informs the cost-effectiveness of policy interventions, and captures education system efficiency, effectiveness, and quality. Future studies are needed to validate and examine the applicability and usefulness of the proposed framework.

Keywords: Education, Value Chain, Learning Loss, COVID-19

Citation: Mohamed, A. (2023). Education Value Chain Analysis: A Conceptual Integrated Framework for Learning Loss Recovery and Acceleration. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 50-61), Denver, CO, USA. ISTES Organization.

Introduction

School closures have been a standard tool in the battle against COVID-19. However, their costs and benefits remain insufficiently known. The suspension of face-to-face instruction in schools during the COVID-19 pandemic has led to concerns about consequences for students learning.

Three main approaches or frames are adopted for measuring and tackling learning loss. The psychometric, the commercial, and the economical (see Figure 1). Here, learning loss is defined as predicted cognitive knowledge and skills deficits caused by reduced time in school based on the number of months during which schools are closed and in no in-person education (i.e., Distance –learning). OECD 2020, Kerfeld, M. et.al 2022.

Categories of approaches and frameworks for measuring learning loss	Description
The psychometric	<ul style="list-style-type: none"> • Here learning loss is framed as predicted skills deficits caused by reduced time in school, which would result in weaker workforce capacity, reduced income for individuals, overall ‘human capital’ deficiencies for nations, and thereby reduced gross domestic product. • Recommended by OECD and the World Bank
The commercial	<ul style="list-style-type: none"> • emphasizes the deployment of psychometric tests of the cognitive development of children not in school. • Adopted by international assessment programs: PIRLS, TIMMS, and PISA
The economical	<ul style="list-style-type: none"> • Here, the tests only measure reading and math, so don’t count for anything else we might think of as ‘learning’. • This is marketed by the testing companies such as Illuminate, Curriculum Associates, and Renaissance and the consultancy McKinsey and Company

Figure 1: approaches and frameworks for measuring learning loss

The existing approaches and frameworks to estimate learning loss and gaps faced by many critics are summarized as follows:

- Focusing on the \$ price rather than the value of education
- looking at learning loss with a very narrow lens – one that’s focused on the quantity of learning rather than the quality.
- Ignoring “learning gain”
- Conceptualized from commercial and economic perspectives.
- Concentrate on easy measures (i.e., time (in months) ;
- Ignoring learning social and emotional skills from daily real life
- Not aligned with global competitiveness reports

Aim of the study

Recognizing the limitations of the existing frameworks and models applied to estimate the learning loss and gap caused by COVID-19 and how to recover such loss and gap and to accelerate learning, this paper attempts to develop a framework to help address and tackle the following issues:

- Nature of the learning loss and gap;
- Position (s) of the loss and gap in the education system;
- Root causes behind its occurrence;
- Interventions and actions to recover the loss and gap and to accelerate learning at different education levels;
- Impact of learning interventions & initiatives;
- Implementation plan.

Methods

Study Approach and Concepts: Value-Driven Thinking and Value Creation Process

This study adopted the generally agreed perspective about learning: “Learning is a dynamic process that builds on prior learning, so stagnation leads to growing deficits. Closed schools not only impart less new knowledge but also mean the loss of already acquired skills on which further learning could build” (Oreopoulos and Salvanes, 2011, Kuhfeld et al., 2020). Accordingly, the education system transforms resources (inputs) by carrying out some sort of process (activities) to create educated people or students (outcomes) (see Figure 2).

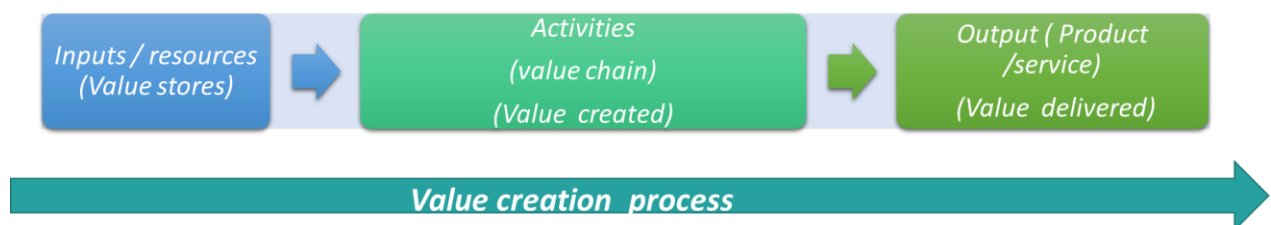


Figure 2: Value creation process

Main research concepts

Value chain

The central to value-driven thinking and value creation process is a concept called (Value Chain). The value chain is a concept of business management that was first described and popularized by Michael Porter in 1985. According to Porter, a value chain is the full range of activities required to bring a product or service from conception through the intermediary phases of production, delivery to final consumers, and final disposal after use. Porter classified the value-adding activities into two main categories: primary and support activities. The primary activities include inbound logistics, operations, outbound logistics, Marketing, and sales and services. The support activities include procurement, human resource management, Information technology, and infrastructure (i.e., accounting, legal, finance,) (see Figure 3).

Porter's Value Chain Model



Figure 3: Porter's Value Chain Model.

Education Value Chain and Value Creation.

Value-driven and value-creation thinking address the education system as a multi-layered construct of various institutions (i.e., chains) that provide education (i.e., create value). The education system starts with kindergartens as the first value chain. Preschool and primary school then continue with secondary education and higher education. Students can enroll in vocational education and training after completing intermediate and secondary school. The student's cumulate competencies (created or added values) (i.e., knowledge, skills, and attitude) while moving from grade to grade within the same level or when transferred to a higher level (Khudair and Abdalla, 2016).

After completing these education processes, the former student regularly enters the labor market and sometimes receives a professional education, either immediately or later. continuing education or "lifelong learning." concept (Kaveh A. and Mya L, 2013). The idea is that learning outcomes are generated and acquired through interconnected and interrelated learning and education operations and activities known as (the value creation process). Figure 4 below illustrates the "lifelong learning" education process as a value-creation process.

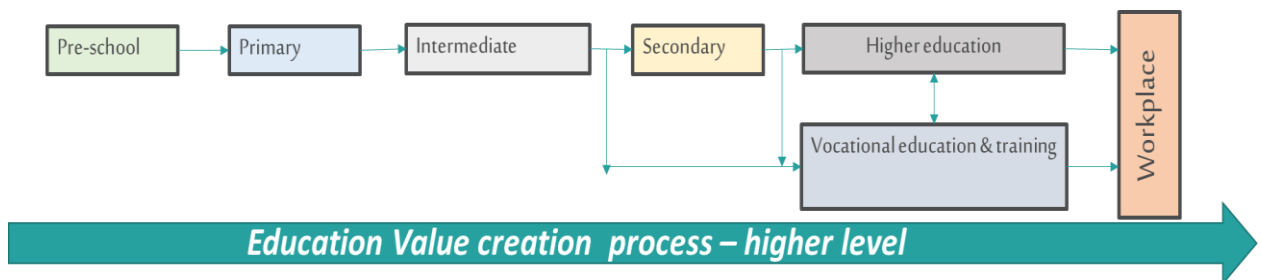


Figure 4: Education value chain.

The Proposed Framework for Learning Loss and Gap Recovery and Acceleration

The framework for learning recovery and acceleration is segmented into a set of operations and activities, (see Figure 5).

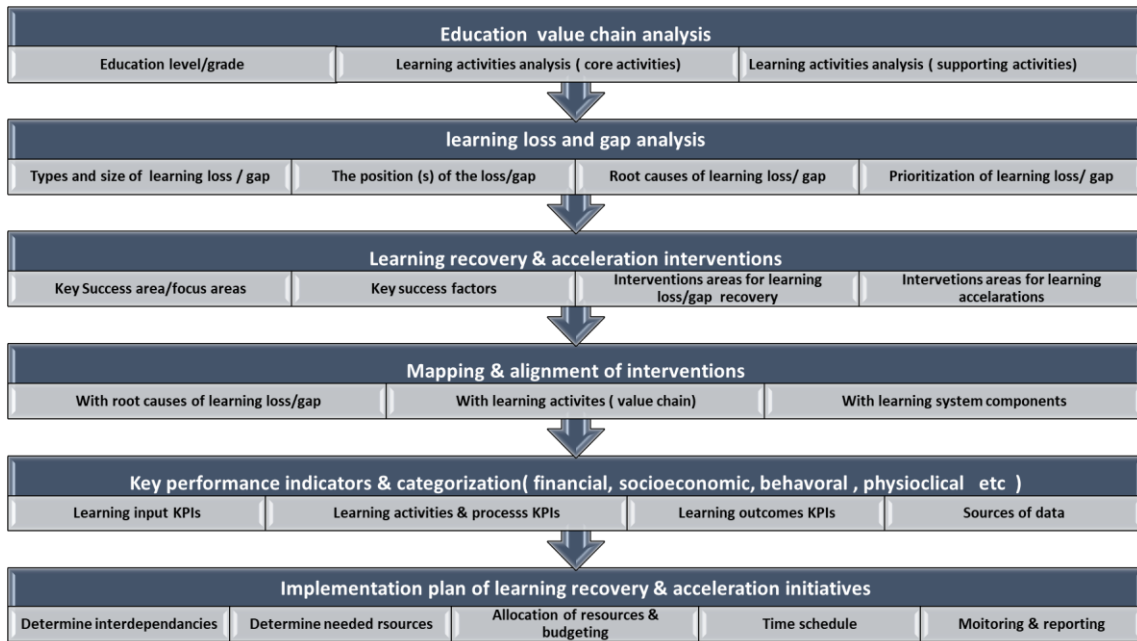


Figure 5: The framework for learning recovery and acceleration steps.

Phases and Components of the Framework

The framework for learning loss and gap recovery and acceleration operations and activities are clustered into four main interrelated and interconnected phases or pillars see Figure 6).

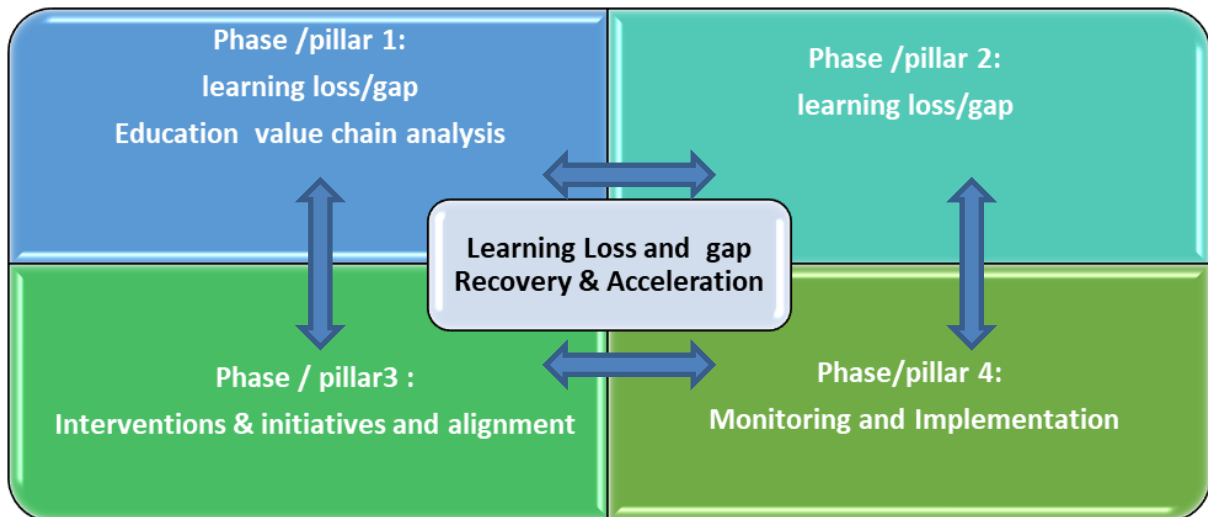


Figure 6: Phases and components of the framework

Phase /pillar 1: Education Value Chain Analysis

This first phase covers the steps of determining the educational level(s) under study, the targeted grade (s), and core and supporting activities of the education value chain and stakeholders (see Figure 7).

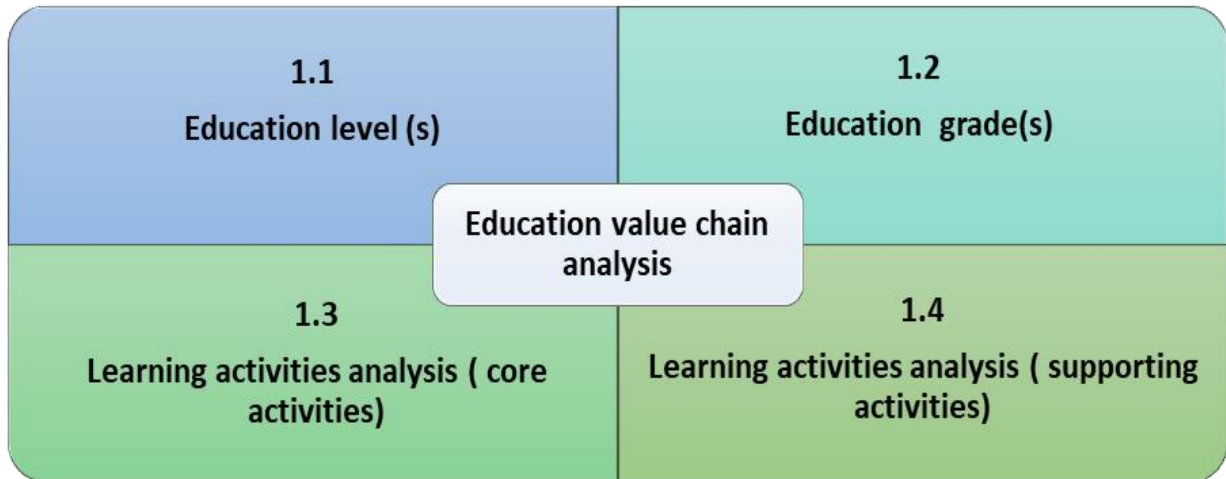


Figure 7: Education value chain analysis.

The education value creation process within each level starts from Curriculum/course development, admission & registration, and material /contents production (upper stream), passing through material distribution/ dissemination and teaching & learning (contents delivery) (middle stream), and finally assessment & evaluation as (downstream). These operations are referred to as core activities (see Figure 8).

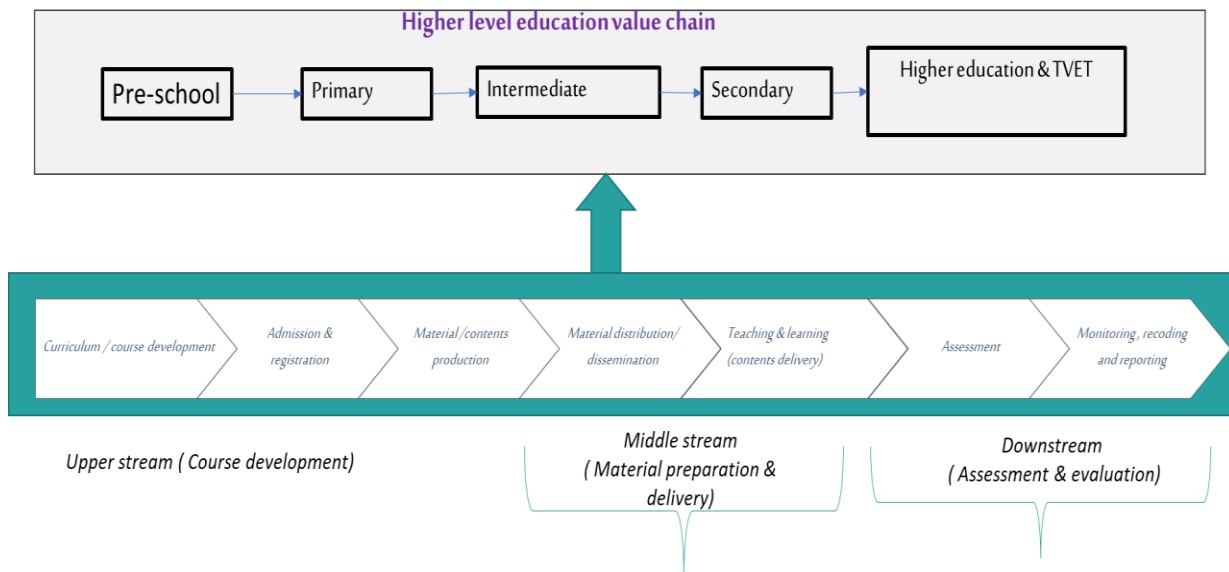


Figure 8: Levels of the education value chain

Adding the support activities including I.T., H.R., and Finance completes the picture of the education value chain (see Figure 9).

The outcome of the first phase of the proposed framework would cover all core and support activities and processes of the education systems at various levels. Hence, shifting the focus from impact and the \$ price to the education value creation process.

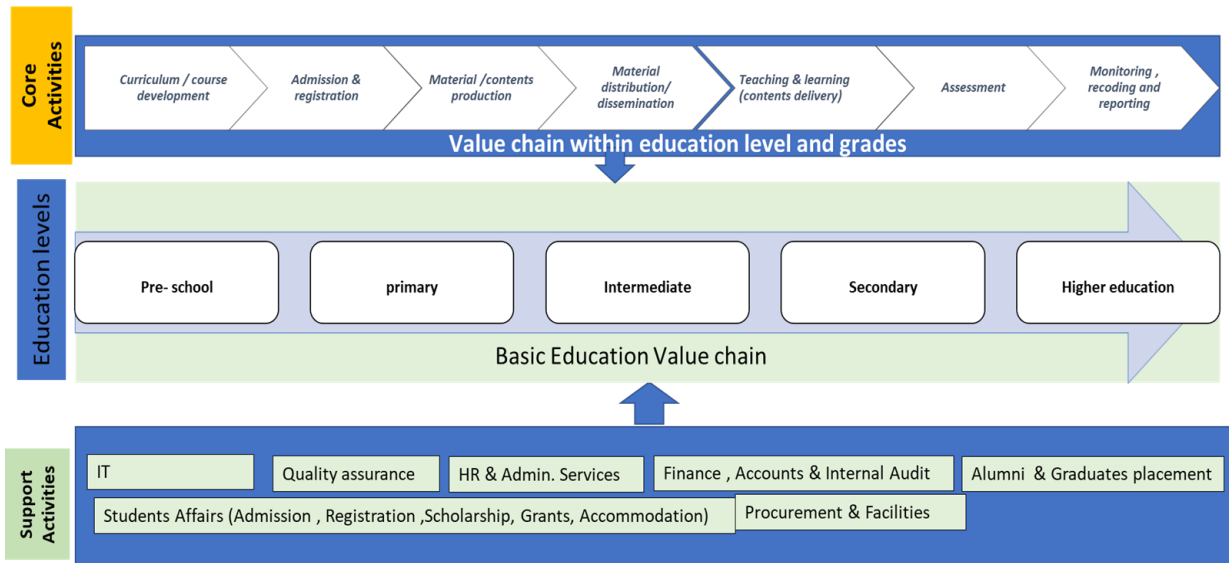


Figure 9: Education Core and Support Activities.

Phase /Pillar 2: Learning Loss and Gap Analysis

Based on the outcomes of phase 1, phase 2 will be devoted to determining the type and size of the learning loss and gap, their position (s) in the learning value chain (i.e., where in K12), and the root causes and stakeholders. Then prioritize the learning loss and gap (see Figure 10).

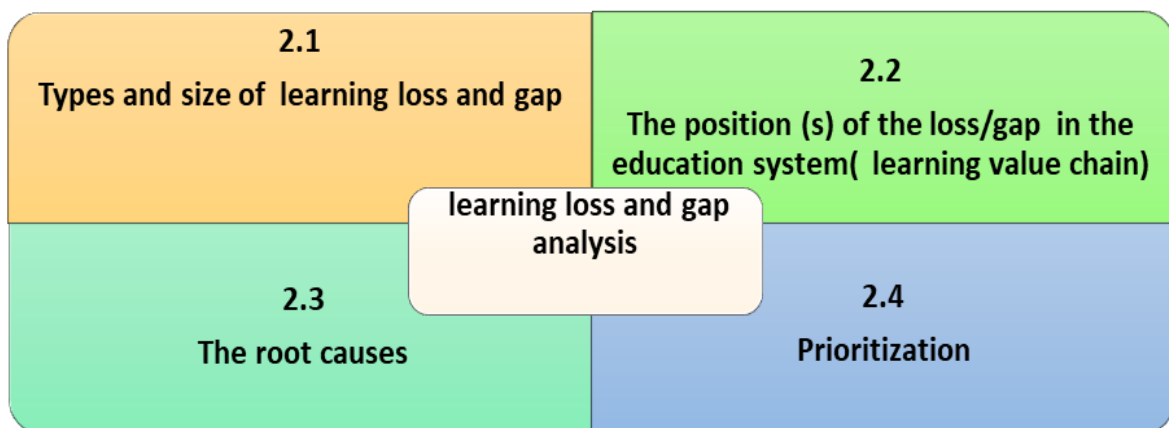


Figure 10: Learning Loss and Gap Analysis.

Having determined the type and size of the learning loss and gap, their position (s) in the learning value chain and the root causes, the outcome of phase 2 of the proposed framework would focus on the quantity as well as the quality of learning rather than on concentrate on easy measures (i.e., time (in months). Determining and prioritizing the root causes of learning loss and gaps would provide sufficient information to help in introducing effective measures and interventions to deal with learning loss and gaps.

Phase/Pillar 3: Interventions Initiatives and Alignment

Based on the outcomes of phases 1 and 2, phase 3 will embark on identifying the focus areas, key success factors, suggested interventions, and initiatives for loss and gap recovery and acceleration. Interventions could be made at different education levels with different stakeholders’ needs and expectations (see Figure 11). The interventions for learning recovery might be in the form of remedial, catch-up, accelerated, or bridging programs.

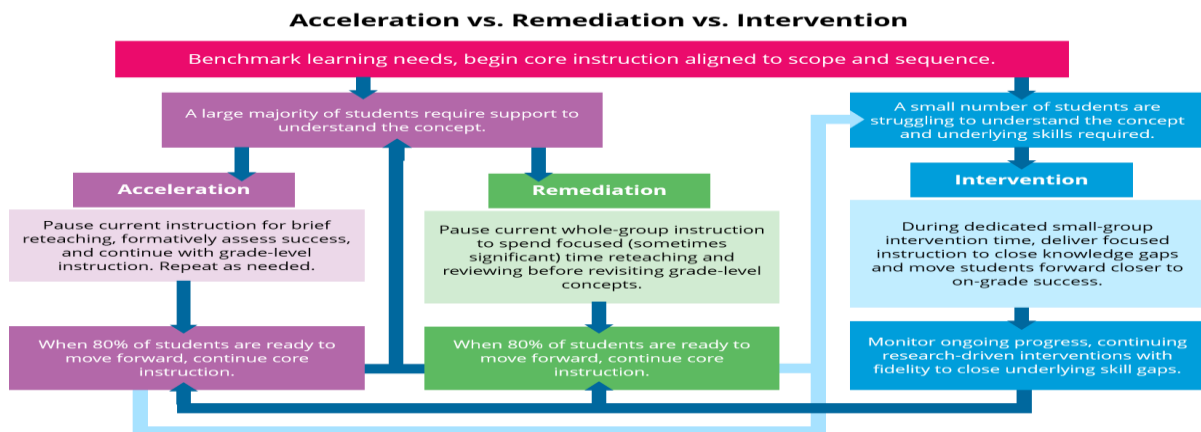
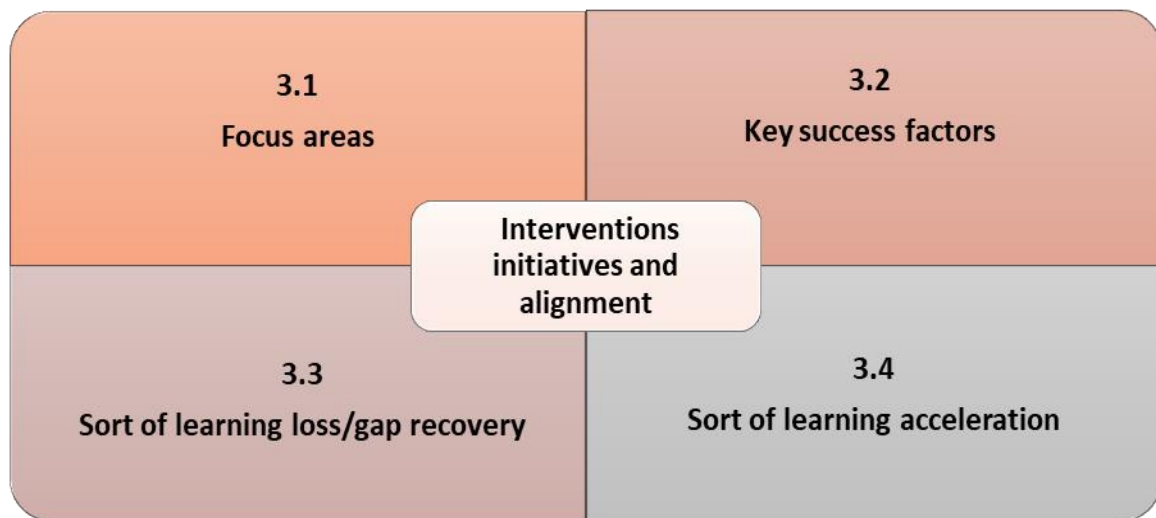


Figure 11: Interventions and initiatives alignment development process.

Having identified the focus areas, key success factors, suggested interventions, and initiatives for loss and gap recovery and acceleration, phase 3 of the proposed framework would provide a checklist of the policy actions, informs the cost-effectiveness of policy interventions, and captures education system efficiency, effectiveness, and quality.

Phase/Pillar 4: Monitoring and Implementation

Finally, phase 4 will embark on developing the implementation plan and the monitoring system. The

development of the plan will start with developing the key performance indicators (KPIs) and identifying the interdependencies between and among the suggested interventions and initiatives. Then determine the resources needed and allocate them to ensure the implementation of the suggested interventions and initiate appropriately. In addition, the schedule for carrying out the task will be constructed. Appropriate monitoring & reporting is needed to provide the necessary information for follow-up and feedback (see Figure 12).

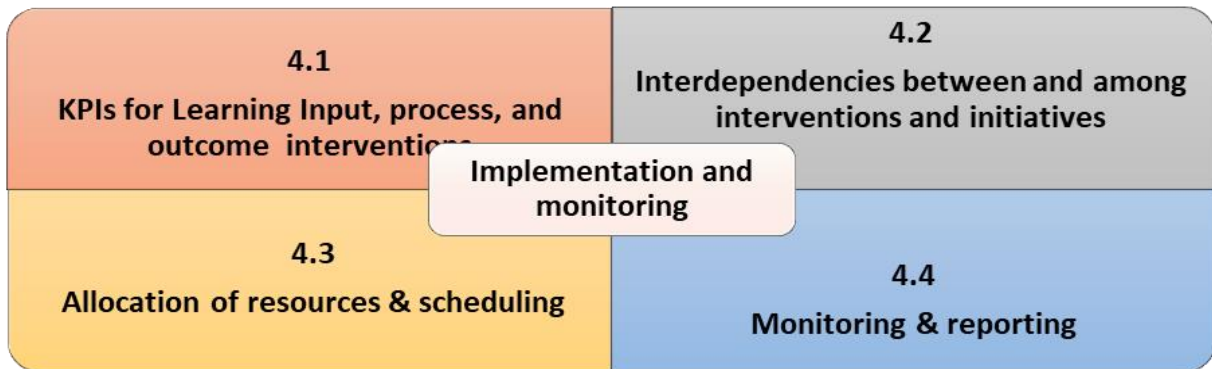


Figure 12: Components of the implementation and monitoring plan.

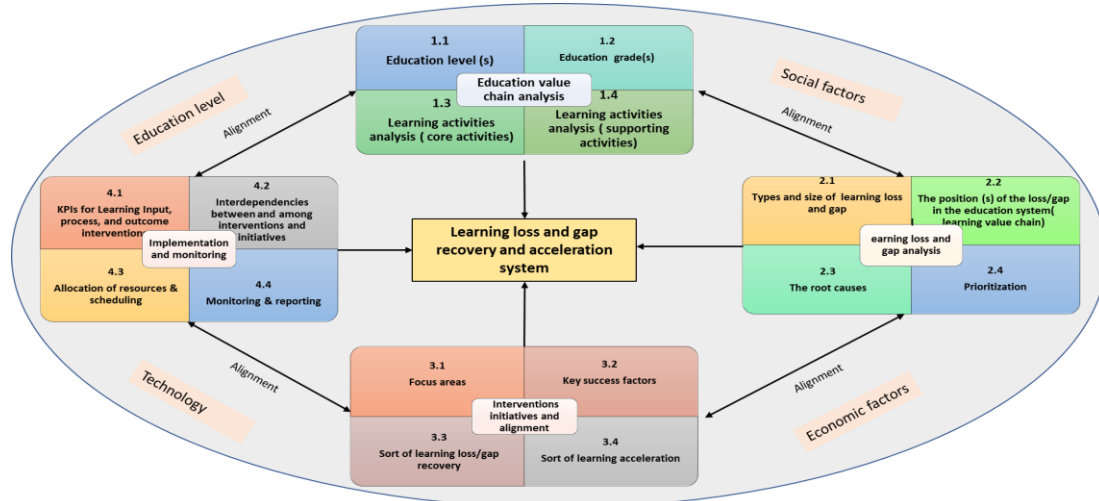


Figure 13: The Integrated Framework for Learning Loss Gap Recovery and Acceleration Put into Context. The outcome of phase 4, would be commercial and economic perspectives in nature and provides a checklist of the policy actions, informs the cost-effectiveness of policy interventions, and captures education system efficiency, effectiveness, and quality.

Figure 13 illustrated the Integrated Framework for Learning Loss Gap Recovery and Acceleration pillars put into context to reflect the surrounding factors and alignment.

Discussion and Implications

Mapping the pillars of the proposed framework with the limitations of the existing approaches and frames to

estimate learning loss and gap, reveals that the proposed framework helps overcome and tackle all the limitations to different degrees. Pillar 3 (Interventions initiatives and alignment) contributes to overcoming 5 out of 7 limitations (i.e.,70%), followed by pillar 2 (learning loss and gap analysis) which contributes to 3 of the limitations (see figure 14).

Limitations of the existing frameworks and approaches to estimate learning loss and gap		Pillars of the proposed framework			
Code	Description	P1 : Education value chain analysis	P2:learning loss and gap analysis	P3: Interventions initiatives and alignment	P4: Implementation and monitoring
L 1	Focusing on the \$ price rather than the value of education				
L 2	looking at learning loss with very narrow a lens – one that's focused on the quantity of learning rather than the quality				
L 3	Not helping determine the root causes of learning loss				
L 4	Conceptualized from commercial and economic perspectives				
L 5	Concentrate on easy measures (i.e., time (in months				
L 6	Ignoring learning social and emotional skills from daily real life				
L 7	Not aligned with global competitiveness reports				

Figure 14: Mapping the pillars of the proposed framework with the limitation of the existing approaches to estimate learning loss and gap.

The practical and theoretical implications and insights discussed in this section stem from the study's outcome (the proposed framework) and its construction.

Practical Implications

The superiority of the framework compared with the existing ones arise due to the following facts:

- Covers all components and sub-systems of education.
- Helps estimate the individual and group learning loss and the gap at different levels and from different perspectives.
- It helps to estimate the cumulative learning loss and gap across time.
- More accurately reflect the quality of the whole education system.
- Determine the root causes of learning loss and gap and their significance.
- Helps capture socioemotional skills and attitudes.
- Provides a checklist of the policy actions.
- Inform the cost-effectiveness and quality of policy interventions.
- Facilitate cost-benefit analysis.
- Helps impact assessments of specific programs.
- Provide information for all types of national and international assessment and competitiveness reports.

If data is available, the proposed framework can be applied and provides information at the various levels of education (i.e., at the student, grade, school, region, national and country levels) (see Figure 14).

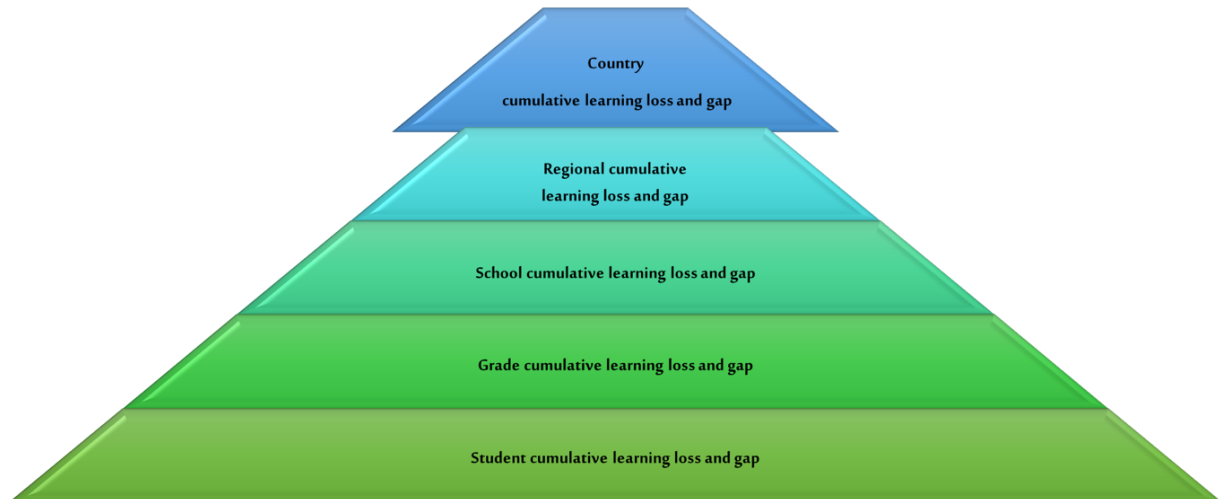


Figure 15: Cumulative learning loss and gap

Theoretical Implications

It is important to understand the framework proposed by this study as a synthesis of conceptual and theoretical frameworks from the outset. The four pillars or phases that make up the framework serve as representations of the conceptual framework. On the other hand, the concepts, principles, and theories drawn from literature and overall trends comprise the theoretical side of the framework. It assists in highlighting the interdependence and even interconnectedness of the different parts. The development of the proposed framework is a dynamic, sense-making process that takes many different shapes and occurs in a non-linear stage. So, it may function in a variety of situations. The study's value-driven approach allowed system components (such as input, processes, and output) to be seen as stages in the creation of value.

The study utilized the general contextual conceptualization (context inside the context). We were able to combine business and education theories and concepts and construct such a complete framework because of the interdisciplinary approach used in this study. The framework's comprehensiveness of its features and parts, as well as how they interact, offers insightful and novel viewpoints that could serve as a new paradigm for future research.

When dealing with learning loss and acceleration, the EVCA approach and perspectives would help develop and implement education strategies and policies that ensure efficient and effective use of the available resources. The degree of interchange, interaction, and interdependence between the components of the EVC should be carefully understood when developing education strategies and policies.

Conclusion and Further Research

The proposed framework is superior, compared to the existing ones, in developing learning loss and gap recovery and acceleration programs. That would provide sufficient information to help in introducing effective measures and interventions to deal with learning loss and gaps. The framework would assist in determining the position of the learning loss and gap that occurs within the main components of the education system (i.e., Input, process, and outcome) and at different education levels. Therefore, the information provided by the framework would help determine the root causes of the learning loss and gap. Hence, provides a checklist of the policy actions, informs the cost-effectiveness of policy interventions, and captures education system efficiency, effectiveness, and quality.

In terms of methodology, the "Value-driven Thinking" approach combined with interdisciplinary viewpoints demonstrated its value in creating a suitable framework for learning recovery and acceleration programs. According to the methodology used in this study, recovery, and acceleration programs are seen as a system with numerous factors that are interconnected, interrelated, and changing over time and geographically. As a result, different study fields can use this methodology and approach. Therefore, the method used to define and address the research problem lends credence to those who favor an interdisciplinary research approach.

Additionally, we can say that the methodology used in this study is distinctive in that it enabled us to define an issue from a real-world setting rather than a hypothetical one. The framework focuses on the simultaneous consideration of theories and concepts from several disciplines and fields of knowledge. To evaluate these underlying assumptions and the applicability of the framework in a practical setting, additional and future research is required.

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The Role of Education in Fostering Social Cohesion

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Abstract: The process of education is an important phenomenon that affects both individuals and the society as a whole. As a result, there is a dialectic of unity and interdependence between individuals and the society. Thus, individuals with high social qualities are part of a developed democratic society. In this sense, strengthening the educational system remains the duty of every citizen and the governing bodies of the democratic system itself. Furthermore, free and fair elections determine the basis of a state and the democratic nature of a pluralistic community. Therefore, a cultured society requires a developed democracy. For this reason, the primary duty of a state is to educate its citizens on democratic principles and norms. The sphere of education and the acknowledgment of shared values are greatly reliant on educational institutions at all levels. The fruits expected to be obtained in the field of education cannot be enjoyed in a short period, but need to mature at their own time. The perspective of the educational processes of the new generation should include the period of life in kindergartens, the lower learning cycle, gaining a higher grade in secondary and professional schools, as well as their attendance in university auditoriums. The following research paper discusses a detailed theoretical analysis of the interdependence and reciprocity of education and democracy. It also explains some concepts and views of contemporary researchers and philosophers on the role of education in the process of social cohesion and integration.

Keywords: Process of education, citizens, democracy, society, and school institutions.

Citation: Baca, F., (2023). The Role of Education in Fostering Social Cohesion. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 62-70), Denver, CO, USA. ISTES Organization.

Introduction

When it comes to the role and importance of education in human society, we think of the air that we breathe every second of our lives. In particular, this issue is closely related to the values of cultural plurality. In this work, it is necessary to present the aspects of intercultural education and globalism in a democratic society. The reason is that the phenomenon of globalism is not only about the form and manifestation of multicultural education, but also the essence of its content. The premises and conditions of the development of a society in our era transform the phenomenon of globalism into a format on a world scale, especially in the fields of technology and sociology. However, in addressing these issues, the field of philosophy does not exclude or isolate itself in the ivory tower; rather, it always occupies the top position in the social development hierarchy.

In the circumstances of the phenomenon of global culture, which is promoted by most developed capitalist countries and with a solid democracy, the issue of multicultural education may not find ground and reach the levels of these countries. Every new phenomenon in human society is born and develops in the "sea" of dialectical affirmations and denials. It does not take place immediately, but gradually replaces old and traditional values with newer ones. However, the phenomenon of globalism is bound to pass through this path. Moreover, the promotion of freedom, tolerance, and compromise in modern society continues to be crucial components of intercultural dialogue. Thus, the level of human rights and freedoms constitutes the essence of democracy in a pluralistic society. Citizens should be educated on how to deal with social problems through citizenship and tolerance, as well as on reaching compromises for the good of society.

In the cohesive essence of democracy, there is a misunderstanding and confusion over the concepts of rights of the majority to rule and the rights of the minority to resist and oppose towards the "dictatorship majority". However, the democratic form of government is a common asset for both the majority and the minority. Moreover, through their decisions both of them may contribute to the growth of the democratic social development.

Political rotation through free elections supports fair competition and the implementation of the will of the people. Therefore, in the first part, the paper focuses on the treatment of education for democracy and the problems that appear in the society. The second part focuses on the importance of intercultural education in the era of globalization. In the conclusion, the paper deals with personal views based on the above- theoretical and research problems.

The Methodology of the Research Paper

The methodology of this paper presents a research diagram of interpretation and argumentation of concepts on education for democracy as a process of social cohesion. Enriched literature and theoretical materials are used for the writing of this paper. With this methodology, the most essential problems related to the role of education in a pluralistic society are selected, relying on philosophical views.

The use of relevant literature served to highlight issues related to the concept of education for democracy in all of its dimensions. The essence of the study raises several important questions and hypotheses, which are addressed in the paper. The paper concludes with personal views based on judgments, analysis, and criticism, alternating between a literature review and personal experience.

Education for Democracy in a Pluralistic Society

History has shown that democracy is the best system for allowing people to live their lives in freedom and with equal rights under the law. However, its demands for even more rights in daily life, as well as for active and

involved participation, demonstrate the necessity of its constant development. The protection of freedom and fundamental human rights, as well as peaceful cooperation and tolerance among citizens, continues to be the core goals of education in a pluralistic society. The highest understanding of freedom is strongly tied to accepting responsibility for one's own destiny and that of the community, rather than being freed from such obligations. Even in a quick look at the early concepts on democracy that the regimes applied in the city-states of ancient Greece, it is easy to notice the essential changes that they have undergone in form and content.

The concept of democracy in our era has been enriched, revised, and elaborated in accordance with the requirements of the time and of the people themselves. The term "democracy" today is used not only to characterize the political relations of a certain society, but also to evaluate its governing form and the characteristics of the political system. The concept of democracy is based on the principle that people as a whole constitute the basis, the foundation on which the entire political life of a society is built. People are the only source of power, while their interests and well-being constitute the ultimate goal of governance. Power must be a product of the free will of the people, where they are free to make the political choice as they want. Thus, freedom is a necessary condition of the concept of democracy. From this point of view, democracy can be defined as a system of ideas, practices, and modes of action that lead to the institutionalization of freedom.

The assessment by Abraham Lincoln about democracy as "a government of the people, by the people, and for the people" marks the formulation of a concept and practice of democracy in our modern era. This formulation turns into a "radioscope" of the standards of demands for freedom and democracy in the society. The theories and practices of the mastery of freedom and democracy have eternal "enemies"; the desire for rule, social inequalities, cultural and economic differences, and other inequalities which Rousseau also pointed out in his book "The Origin of Inequality among People": "Such was the beginning of society and laws, which gave new constraints to the weak and new powers to the rich, permanently embedded the law of property and inequality, by a violent appropriation and brave, took an irrevocable right, and, for the sake of the gain of some ambition, finally subjected the whole human race to toil, slavery, and misery" (Rousseau, 2008, p. 109-110).

The level and existence of freedom and democracy are the active participation of citizens who play an indispensable role in the construction and protection of its fundamental values. Democracy remains the implementation and embodiment of freedom in the lives of people. On the basis of the existence of freedom and democracy, the political systems of power are established such as the executive, legislature, and judiciary. The term "citizen" includes a broader representation of rights and duties in a democratic society. The exercise of rights by an individual means the responsibility that he has to protect and strengthen these rights, for himself and for others. The dialectical unity of rights and duties in a democratic society is expressed in the fact that, on the one hand, individuals enjoy the rights to freedom of speech, assembly, and freedom of religious belief, which testify to the level of a democratic society. On the other hand, rights are not the personal property of individuals, tools, or "expressions of freedom" to oppose the majority.

In a democratic system, citizens take their own governance into their own hands. Their education with the

highest human values is closely related to the acute social problems they face. Achieving a high level of their ideology and world understanding also ensures a society at the height of time. In almost every historical period, several viewpoints have appeared on the concept of freedom, about the role and relationships that individuals and society have with freedom, as well as how they gain from its power in daily life. Therefore, freedom, as a natural right, is the essence of thinking according to individual beliefs and free will. The Declaration of Independence of the American Revolution of 1776 emphasizes: "All men are created equal...they are endowed by their Creator (God) with certain unalienable rights, among which are life, liberty, and the pursuit of happiness." (Taipplari, 206 P.53).

In the context of the constraints that all three branches of government, such as the legislative, executive, and judicial face, the concept of freedom serves as a crucial barometer of the development of a society and its people. Nietzsche, a German philosopher, enriches, deepens, and broadens our understanding of freedom. "The will to be responsible for oneself, to distance and separate oneself from the influences of others in order to achieve a unique independence of thinking on existence is defined as freedom" (Nietzsche, 1999, p. 28). In a more practical sense, freedom is nothing more than the desire to fulfill and realize one's needs and desires in relation to the possibilities and realities of one's life. Rousseau believed that a good government should have as its fundamental aim the freedom of its citizens. According to him, the best form of government in modern society is the one that affirms the individual freedom of all citizens within the limitations inherent in civil society. Rousseau concluded that: "As long as property rights and laws exist, people can never be completely free in a modern society" (Rousseau, 2008, p. 95).

He strongly believed in the existence of certain principles of government that, if put into practice, could secure for the members of society a level of freedom that at least approximated the freedom enjoyed in the state of nature. In his philosophical works, Rousseau describes the necessary principles that must apply to social institutions, at the top of which he defines the preservation of "natural" freedom. Therefore, he emphasized: "To give up personal freedom means to give up one's own quality as a human being, from the rights of human nature, even from one's duties" (Rousseau, 2008, p. 195). Thus, in the meantime, he inextricably linked his concepts of freedom and democracy with the establishment of a legal state, i.e. the law, which, above all, is the result of the general will, where the general will is also the desire of the sovereign, of the people. Showing a special appreciation for the law as a sacred value, Rousseau would extend it as a whole to all the power of laws, the prohibition of whose action he justifies only when it comes to saving the homeland. In this case, public security is supplemented by a special act. The politicians of early times, said Rousseau, always talked about morality and virtues, while the one in modern era talk only about trade and money.

Democracy is fueled by the love of knowledge and debates about the social problems of society. Obscurantist and dictatorial attitudes towards the voice of the people and the stages of the working masses are inappropriate and deadly for a democratic system. In his book "Two Treatises on Civil Government", John Locke presents the need to implement and protect the law of nature, which derives from the logic of God, according to which this law provides people with the most basic rights, such as: " the right to live, the right to property, and the right to

education". But without being able to avoid its dualistic nature, where, on the one hand, it embodies a philosophy dear to humanity, according to which many wounds of human society would be healed, on the other hand, it remains vulnerable and uncertain. Although the concept of democracy is imagined as a philosophy and mentality between a "heavenly" dream of a just and humane society, if it is not fought every day for its construction, it can remain hypothetical and only "a beautiful dream on paper."

Intercultural Education as a Process of Social Integration

Today's modern world is characterized by the speed of communication among people, state and private institutions, cultures, and economic relations of people and different countries. The development of science and technology remains a necessary and comprehensive prerequisite for social cooperation. Communication plays a special interactive and social role in today's modern world. According to Walton, "*Communication is a right for everyone, a kind of life service with two complementary dimensions: to communicate is to express... how I have something to say, and I have the right to say it. Everyone has something to say, and the right to express oneself*" (Wolton, 2009, p. 27).

The American thinker, Martha Nussbaum, inspired by the views of Socrates and Aristotle, emphasizes the importance of education for democracy in a society. One of the main questions raised by M. Nussbaum in her studies includes the formation of citizens with deep democratic knowledge. Nussbaum suggests some essential interventions related to a society's education. According to her, each individual must have the critical ability to see and deal with the problem of education for democracy from a personal point of view, which does not go against the interests of society. She underlines the need to encourage a sense of responsibility and enforce critical thinking through relevant pedagogical interventions. The formation of students' personal skills is necessary. This means a particularly attentive education in literature and the arts, which puts students in contact with gender, race, and ethnicity and directs them to intercultural experience and understanding.

Thus, according to Nussbaum's learning theory, there are three aspects of the educational formation of the society in today's world:

- The ability to think critically, which includes the development of one's own critical thinking in solutions and actions. Thus, it requires a deeper individual reflection on problems and reality.
- The ability to feel part of humanity, which is about the idea of a broad understanding of society, which tends to the needs of all human beings with common interests and needs, and which allows them to cooperate together.
- The capacity for narrative imagination, which takes into account a society's perspective through the lens of empathy and the ability to imagine through the "stories of others." This allows each individual to get to know and interact better with each other.

Rapid social development dynamics have an impact on social cohesion. This requires the creation of mechanisms that balance social interests through different forms of education. Another American thinker, John Dewey, emphasizes the importance of representative democracy, which realizes the participation of all individuals.

"Representative democracy is said to be realized when it ensures freedom of expression and the protection of universal rights" (Dewey, 2003, p. 11). To overcome social obstacles, which can turn into serious problems, Dewey recommends advanced forms of liberal education, linked theory and practice. Dewey's intention was to make education a priority and a desire for children, believing in quality education to make society more developed. Ralph Waldo Emerson, in his book "On Education," emphasizes that people are educated not only on the basis of specific elements but in a set of ways such as: the arts of speaking, at school, college, and society, which make the difference among people, the human world itself, and the other living things that surround us.

Triumphing over everything in life remains the main goal of man. He is always in search of achieving his goals, despite the obstacles he faces. Man considers the world and nature to be his teachers, including the moon and sun, as well as plants and animals. When we see these phenomena and are surprised by them, we should not be in a panic because we will become slaves to nature. In these circumstances, school is considered the most important institution in which pupils and students, as future citizens, receive basic knowledge about society and coexistence among themselves through intercultural education. The word "intercultural" is composed of the Latin "inter", or "between," and "culture." This means that education takes place between two or more cultures. The term "culture" refers to language, customs, manners, holidays, morals, religion, music, medicine, clothing, food, etc.

Intercultural education enables people to understand the behavior of other people who belong to another culture even though it is different from their own. This is achieved through coexistence with other cultures, which are no longer "foreign" and unknown. People must meet each other with respect, appreciation and tolerance in order to develop an equal community. The coexistence of different cultures aims to lead to a common point and the creation of conditions for living side by side with each other.

The goal of intercultural education is to create a dialogue between different cultures as well as to develop an openness to another culture, which makes you willing to learn from the other culture and accept it in your life. It is not only important to discover and live the similarities of different cultures but also to observe the differences or contrasts as enrichment and expansion of personal and social horizons. This creates the possibility of a society composed of different cultures that can live together in peace and harmony with each other.

Intercultural education constitutes the healthy ground for the coexistence of many cultures of different people. In essence, with intercultural education, we will understand the recognition and acceptance of the cultural traditions of other people. For this reason, intercultural education remains the protection and development of the highest human values, as well as equality and the right to live with human dignity. Education includes the

worldview related to the way of thinking as well as the feelings and actions of individuals in a society. In addition to the tendency for intercultural coexistence, today's societies are also aware of the existence of worldview differences and the fact of being different. The educational system tends to focus on the multicultural character of the society towards which we are moving. Such a request effectively realizes intercultural education.

Intercultural education and multicultural education are inseparable from each other, which require the deepest knowledge of national historical-cultural traditions for the achievement of exchanges and quality relations. In this sense, both forms of education play the role of providing the basis for the magnificent edifice of coexistence among people. People can learn from each other only when they have mutual differences. The most efficient tools remain mutual respect, knowledge of each other's cultures, and coexistence in peace, understanding, and tolerance. Understanding and living in peace and harmony begins in the cell of the society, which remains the family. Stella Ting Toomey an American researcher underlines: "People in every culture are born into a network of family relationships" (Toomey, 1999, p.144).

In his book "Democracy and Education", John Dewey discusses two basic principles regarding education. The first principle includes the concept that: "General Education for all at a high level serves as a basis for Democracy as a way of life"; the second principle is: "Living together in modern society requires public exchanges, and this is not possible without educated citizens" (Dewey, 1966, p. 110-111). Through these two principles, Dewey advocated education that believed people should understand and shape creatively and humanely these unstoppable changes. Dewey believed that American democracy was a process of continuous development. The main components of this developing process of American democracy, according to him, were mainly the citizens, both in their public and private roles. This process is necessary if we want citizens to become part of democracy.

Dewey underlined as well the specific feature that democracy should embody, which, according to him, should be a form or way of life. Democracy should be a part of everyday life, even when people are unhappy with their government. Dewey was very realistic and a predictor of complicated situations that could appear in the system of democracy. According to Dewey, the theory of democracy refers to a form of life where different groups can live together peacefully, share public interests, make wise decisions, and be able to adapt intelligently to new situations. People live in a common community and share with each other a lot of values, and common life. In these circumstances, communication among them remains the most useful way. Communication not only promotes active participation in the strengthening of relations in a society but also cements them more and more. As an old popular proverb states: "Near the eye, near the heart, far from the eye, far from the heart". "Sometimes a book or a letter makes human ties closer among those who live far apart than they can be among people who live in the same house" (Dewey, 1964, p. 8)

An important place in intercultural education is occupied by the presentation of the phenomena of globalism and transition in post-communist societies, as it happened in Albanian society. Globalism cannot even exclude the

format of culture on a world scale, both in the technological and sociological fields, without excluding the field of philosophy, which can never be closed in the ivory tower but remains as always at the top of social-political developments. The imposition of global culture, especially from the most developed capitalist countries and with a consolidated democracy, may not find the right ground due to the interdependence of a number of developments in other fields of science, culture, and production. Every new phenomenon in human society immediately causes groups for and against it, because it does not immediately take place in their worldview but replaces their inherited values step by step.

The consequences of globalism in a pluralistic society may aim at flattening the values and features inherited from the culture of the people. In our era, it is an obvious reality to outline and formulate the theoretical-practical points of view towards the causes of the failure of the communist ideology and one of the most powerful philosophical currents of the last century, which brought great consequences and changes in today's human history. During this process, we cannot avoid the dangers that arise from solving problems and conflicts through the use of force and violence. The totality of the above problems suggests the conclusion that: "The mosaic of cultural plurality should be treated and nurtured as the greatest asset of human society, which does not endanger any people or nations but enriches them and raises the demands of democracy to a higher level."

Globalization continues to be one of the challenges for human society, but still, we tend to present it as a new spirit in world politics and a progressive phenomenon, with the expectation and belief that it will contribute to the improvement of people's lives. But, we also face arguments that appeal to opposing assessments. This is because small countries are being exploited by big countries for human resources, free labor, material resources, and the ruthless competition for developed technology that these countries possess. Efforts to establish democracy are efforts to organize societies in order to be able to restore new social values and the functioning of the legal state in full harmony with them.

Conclusion

The paradigms of philosophical thought from earlier centuries are transmitted to human civilization by the XXI century's philosophy. It carries a conservative and vulgar point of view, more as a means to an end than as a worldview that equips today's society to deal with the contentious issues of today's world and that no longer reacts to the emergence of new realities. In these circumstances, through progressive philosophical viewpoints, the conditions are created for the further progress of the "cultural evolution" of human society and thus also the philosophical one, for a development that does not follow a straight line. It is contradictory and complex; it preserves and guarantees the variability of views and concepts of different cultures, which feed the contemporary philosophical worldview.

The German philosopher Martin Heidegger pointed out that "parties in dialogue would elevate each other." Besides the transition to an industrial society, today's era also creates conditions for the validation of the

philosophical concepts of today's developments in society. The sayings of the French philosopher Jean-Jacques Rousseau, that "Man is born free, but dies enslaved," serve as a guide, which shows the ships the dangers that human society must face. Thus, above all the sciences, philosophy has the greatest potential to unite the world's diverse cultures under the mission and purpose of paving the way for social peace and prosperity. Thus, philosophy as a great discipline can and should create a round table of debate and consultation to find ways of development and progress, not only for some countries and people, but for all people with different cultures, ideas, colors, and races.

Intercultural education will face the obstacles of globalization in the society due to the technological disparity among people and countries of the world, and financial conflicts as a result of the use of raw materials from developed countries. Today's world is changing at a rapid pace, paving the way for a "new" world system through globalization. This is the process of increasing interdependence among different societies, people, and countries.

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How to Build Online Social Presence: Strategies for Community Building

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Abstract: With an increase in Synchronous online learning, there is a shift in how current teaching practices are impacted and what is important to students and student learning. Synchronous teaching is not taking face-to-face strategies online, instead, it requires intentional design and thoughtful planning. To that end, this paper discusses pedagogical strategies for designing online spaces that create, cultivate and sustain social presence. Literature and research that support the connection between social presence and student learning will be shared, including the presenters' recently published text *Effective Learning Environments in Higher Education Online Settings: Establishing Social Presence*. The framework presented in this text separates Social presence into three themes: social climate, membership in a learning community, and students feeling real. In this paper, authors elaborate on how instructors can build community in online courses.

Keywords: Social Presence, Synchronous Online Learning, Online Teaching Strategies

Citation: Harvey, T., Moroz, K. & Carlson, J. (2023). How to Build Online Social Presence: Strategies for Community Building. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 71-88), Denver, CO, USA. ISTES Organization.

Introduction

With an increase in synchronous online learning, current teaching practices are shifting and what is important to students and student learning is being impacted. Synchronous teaching is not taking face-to-face strategies online. Instead, it requires intentional design and thoughtful planning with online teaching and learning specifically in mind. To that end, this paper discusses pedagogical strategies for designing online spaces that create, cultivate and sustain social presence. Literature and research that support the connection between social presence and student learning will be shared, including the researchers' recently published text *Effective Learning Environments in Higher Education Online Settings: Establishing Social Presence* (Moroz, Harvey & Carlson, 2022). The framework presented separates social presence into three themes: social climate,

membership in a learning community, and students “feeling real”. In this paper, the researchers elaborate on how instructors can build community in online courses, specifically during synchronous sessions.

An advantage of synchronous online learning environments is the ability to bring together students from different parts of the country and even from around the world. This enhances a course through a diversity of voices and experiences, as these students bring a variety of perspectives and experiences and can add richness to course discussions. The wide array of locations represented, however, does “require a bit more planning and preparation due to time zone differences, but the trade-off for these diverse student perspectives is worth the effort” (Moroz, Harvey, & Carlson, 2022, p. 34).

Also worth the effort is the classroom research, trial-and-error, and the sharing of ideas that has provided a better understanding of what is effective. The most significant finding is that online sessions are more productive in creating social presence when they are designed with purpose and accountability. Even the element of *time* is spent differently online than face-to-face; for example, moving students to groups online is the click of a button vs. physically moving when in-person. These are considerations that the synchronous online teacher must take into account.

With accountability and purpose in mind, instructors are encouraged to create online synchronous courses with a focus on creating community, allowing students to put a face with a name and make genuine connections with one another in the context of learning. Establishing this space and creating these connections helps students take an interest in each other’s work. It also has the potential to build long-term collegial relationships. Well-designed synchronous meetings help students feel less “anonymous” and the immediate feedback from their peers makes them “feel like a real person” (Moroz, Harvey, & Carlson, 2022, p. 41). An advantage of including synchronous sessions is the ability to *see* other students and better understand tone and context. When students are able to hear someone else’s thoughts verbalized, it helps strengthen their understanding of the content. And online synchronous meetings allow for real-life interruptions by pets, family members, or others, which increases the sense of “feeling real”.

In this paper, the researchers identify how social presence impacts student learning and describe pedagogical strategies for designing online synchronous spaces that create, cultivate and sustain social presence. Authentic examples and tools to use in synchronous online teaching environments to increase social presence are shared. Additionally, a framework is shared that depicts what to consider when intentionally creating spaces that foster social presence in online classes.

Literature Review

The definition of social presence comes from the work of Gunawardena and Zittle (1997), who established that when people connect with others in new social situations, they create social presence or a degree of interpersonal contact. Classrooms provide the context for new social situations between learners.

Garrison et al. (1999) connected this idea to learning and identified social presence as the ability of learners to project themselves socially and emotionally as real people in a learning community. “Real” in this context denotes authenticity, vulnerability and connectivity. Aragon (2003) argued that social presence was “to create a level of comfort” (p. 60) between people and/or between students.

Garrison (1997) asserted that social presence is measured in “the degree to which participants are able to project themselves affectively within the medium” (p. 6). Therefore, the medium of the online synchronous environment needs to establish the conditions for students to be authentic, vulnerable and connected.

Alanazi (2013) reminded us that “...involvement is crucial to students’ success, whether it is through a feeling of ease with the instructor or classmates...students also need to be invested in the course content. These educational processes occur through an emotional connection” (p. 32). This emotional connection contributes to the sense of community which then contributes to emotional connection. The result is strengthened social presence, engagement, feeling real, and increased learning.

Methods

The Social Presence Framework (Moroz, Harvey & Carlson, 2022) (see Figure 1) identifies the effective and affective factors within the learning environment which influence the degree of social presence. *Course Design* includes the work that faculty put into planning, creating and teaching in the synchronous environment. The instructor's role is paramount in establishing social presence. Intentional actions, for example, making presentation slides available to students prior to class, is a practice that can help students feel organized and more focused. The instructor should also set the precedent early in the synchronous class of joining the synchronous group meetings, if only for a quick 30-second “pop-in”. This is similar to how an instructor circulates in an in-person classroom and is recommended to strengthen that sense of instructor presence and building community.

Course Community Members are the participants, including instructors and students. These are the actors at play; everyone has a role in establishing the sense of community. In this framework, *Social Presence* is measured by three factors: the social climate of the course, the level of membership students feel in the learning community, and the degree to which students feel “real”.

Based on the data the researchers collected related to social presence, the researchers developed six approaches with connected learning activities that, when implemented, boost social presence.

- effective discussions
- intentional interactions and transactions within all assignments
- enhanced personalization
- professional and personal reflection
- varied assessments

- humanizing the experience

In Figure 2, the researchers illustrate the important interplay that must exist among the varied aspects of an online course, an interplay that does not follow a linear process. Rather, each aspect impacts the other in fluid reciprocal ways as students, for example, interact with course resources in preparation for a discussion and then continue to deepen individual understandings as they co-construct meaning with instructors, peers, and other students.

Effective/Affective Online Learning Environment

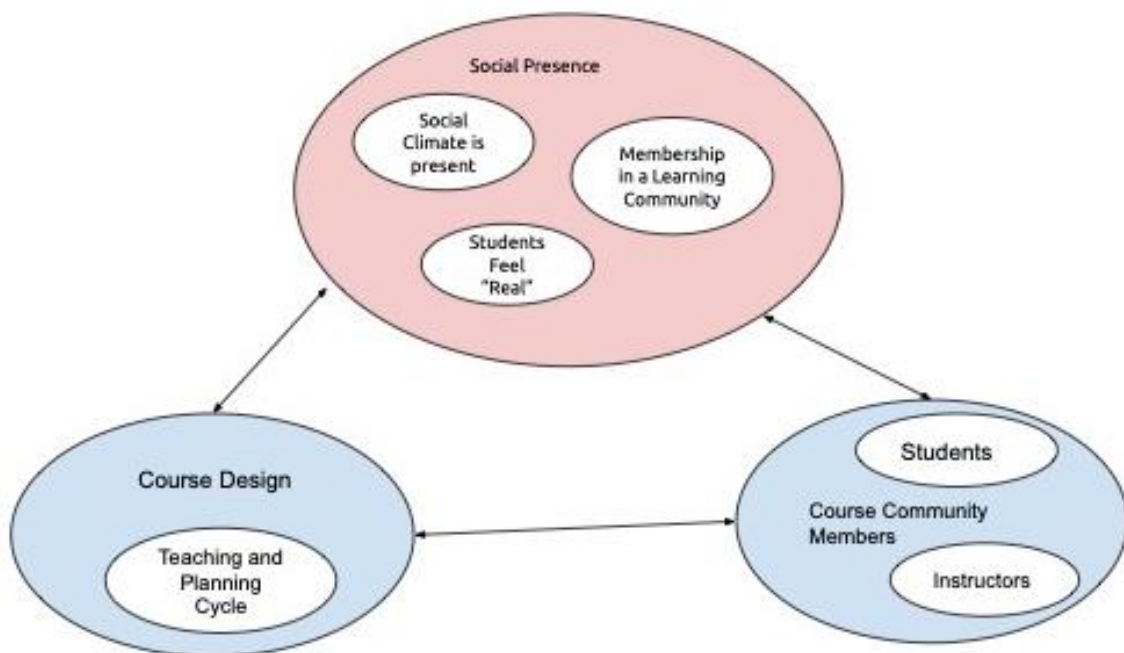


Figure 1. Social Presence Framework

(Reprinted with permission, Moroz, Harvey & Carlson, 2022).

Note that the activities are the link between the course resources/content to peers, course resources/content to the instructor, the instructor to student, and student to peer. Well-selected activities taught skillfully advance a “reciprocal association where each has the ability to influence the construction of knowledge, influence the environment for which it occurs, and thus, impact the personal experience of the student” (Moroz, Harvey & Carlson, 2022, pp. 26-27).

The personal experiences are comprised of three essential factors for an engaged learning environment: cognitive, social, and emotional. Course design for a synchronous learning environment integrates the three factors and includes activities that combine finite elements of each. As shown in Figure 3, the factors overlap and intersect showing the relationship between them.

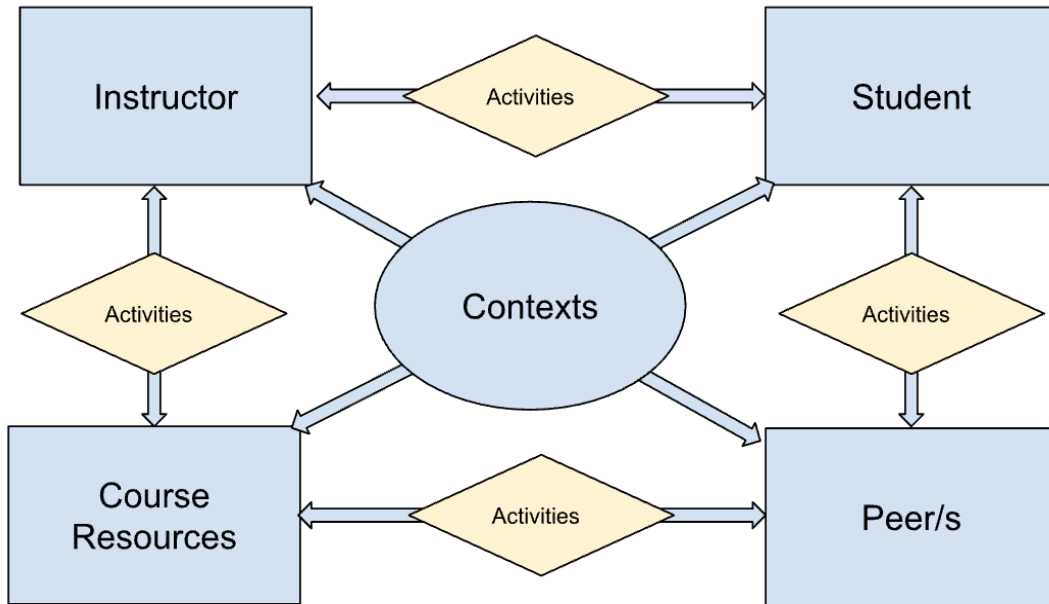


Figure 2. Interplay in Online Learning

The next section provides activities and examples for developing social presence and community in a synchronous online learning environment.

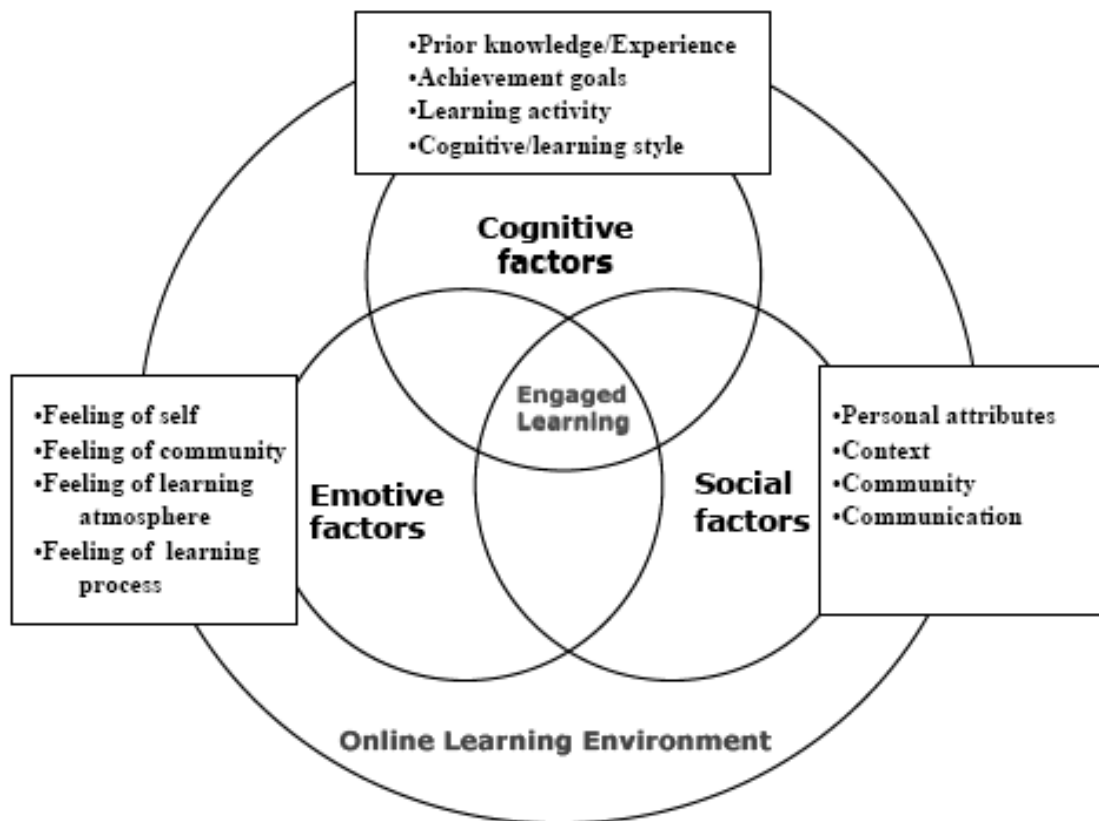


Figure 3. Framework for Course Design.

The focus of these examples are related to how to: open/close online synchronous classes, manage and maximize classroom discussions, increase accountability and productivity of small group work time, schedule and time classroom breaks, heighten engagement and content understanding, and clarify student and instructor roles. Throughout these examples, specific digital tools are identified for use during online synchronous classes.

Word Game

The strategy, Word Game (Gallagher, 2009), is an activity that enhances personalization, reflection, and humanizes the learning experience. It can be used synchronously or asynchronously. Using Padlet, Google Doc, or slide feature, select a word or very short phrase that connects to the topic. The word can be selected from the assigned reading, film, or audio that the students have read/viewed or will read/view.

Once the word is identified, instructors need to direct students to individually, for 1-2 minutes, brainstorm what they think, know, or something they have to say about the word. Students then share ideas and/or selected quotes that resonate with them. This idea exchange provides an opportunity to connect content and develop a connection to others' thinking or experiences simultaneously. It can also served as an effective formative assessment to gauge students' prior knowledge or understanding of the content.

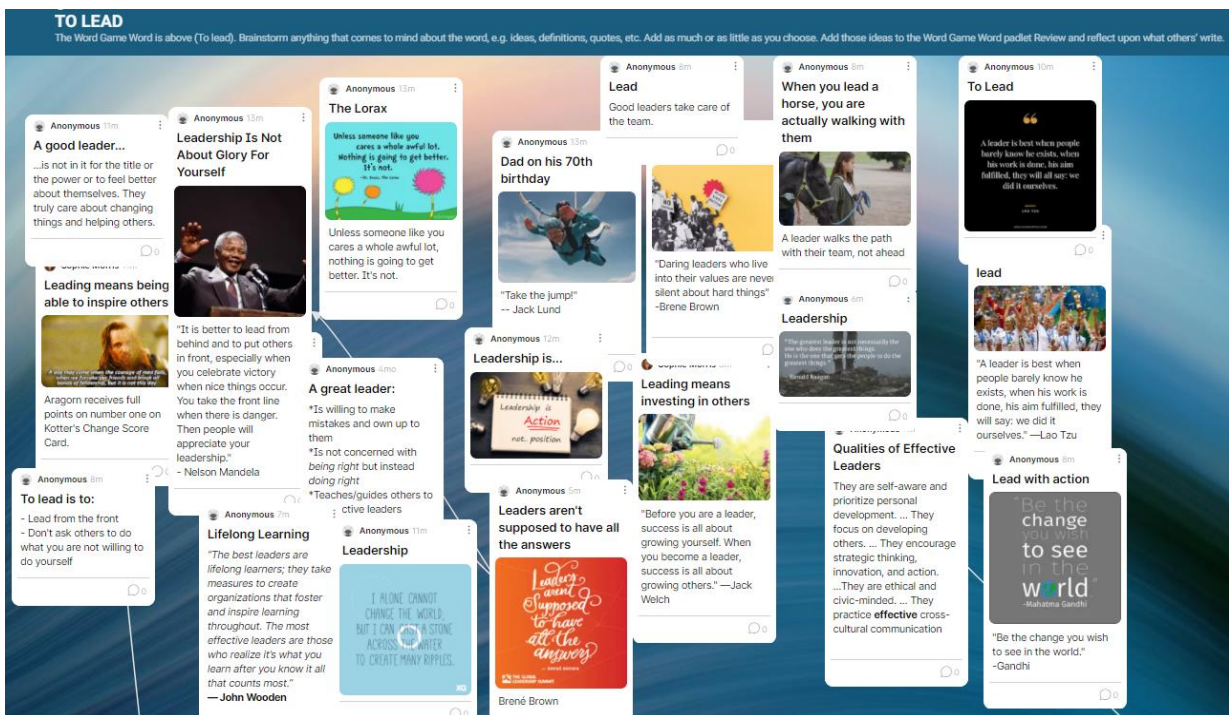


Figure 4. Word Game Using Padlet Example

Comprehension Mind Map

An activity that prompts individual reflection and thinking about content, collaboration, and community

building is the Comprehension Mind Map. In this three-step activity, students make connections, show what they know, build upon their own knowledge, and extend thinking. A Padlet or Google Slides will need to be prepared for this activity. The instructor needs to select a concept that the students have been exploring and studying. The concept is positioned in the center of the mind map.

Step 1: Students document their thoughts, ideas, questions, or phrases and add it to the mind map slide using a “drawing” or “line” feature (in Google Slides under “Insert”) to create a textbox on the desired slide.

Step 2: Prompt students to make connections between their ideas and others’ ideas using a line or arrow to show that connection.

Step 3: Have students select a shape and place it on the idea/s that most resonate with them.

In Figure 5, the students had been studying the concept of critical literacy for two weeks. They had read, written, listened to, and discussed this topic in a previous synchronous session and then shared their understanding and connections in the second session after building on their knowledge of the topic in small group discussions and further readings.

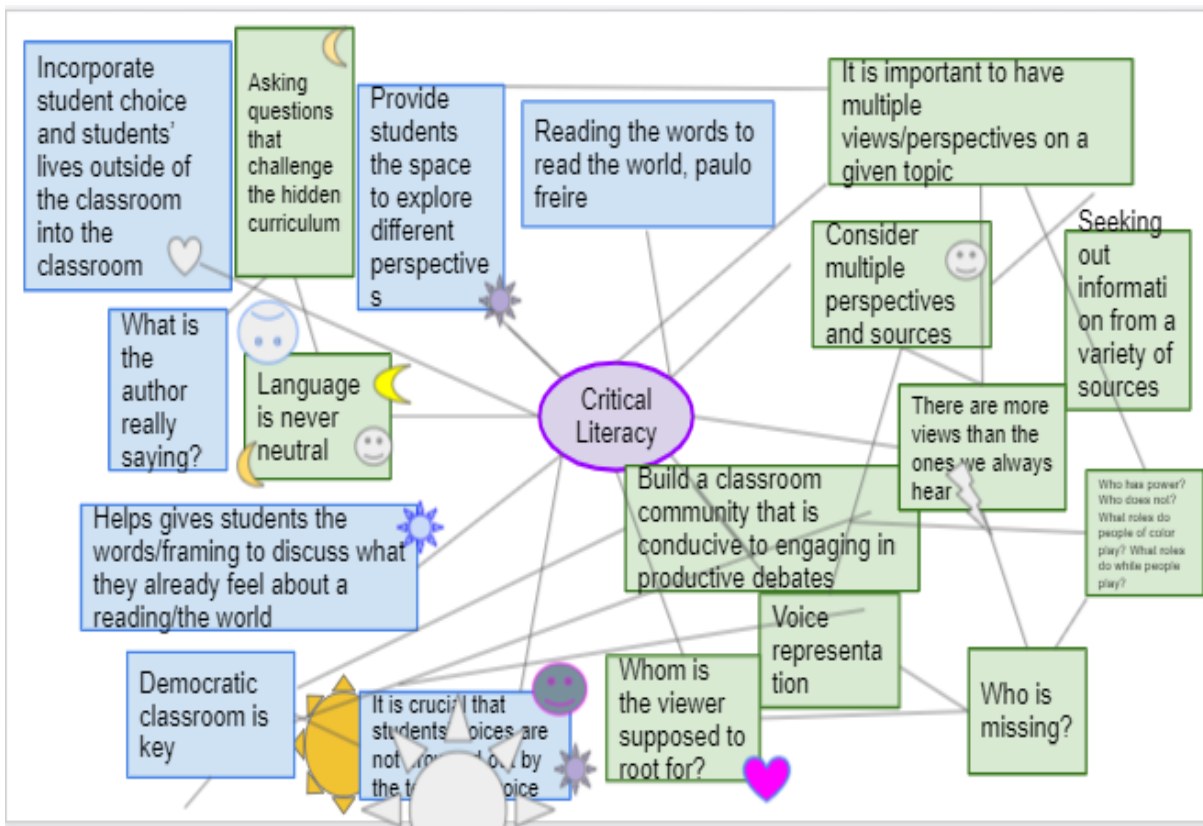


Figure 5. Comprehension Mind Map Example

Making Connections/Visual Concept Map: Small Group Discussion Activity

In this activity, students are given 10 terms/phrases from a course reading, lecture, video or another content source. In small groups, they discuss and define each term. Then, they create a visual concept map that shows the relationship/connection between terms. Students can add additional terms to the concept map, if needed to demonstrate these connections.

Slide 1

Lagemann - Chp 7
In groups, please use the following ten terms/items to make a concept map:

- Francis Keppel
- Standardized testing
- Coleman Report
- Politics
- Education research
- NAEP (Nat'l Assessment of Educ Progress)
- Title I evaluation studies
- NIE (Nat'l Institute of Education)
- Accountability
- School funding

Slide 2

Lagemann - Chp 7

1. Use the map to show how these items are connected.
2. You can add terms.
3. Discuss what lessons can be gleaned from this chapter.
4. Please select a spokesperson to share (screen share) and explain your map/discussion.

(35 minutes)

Team 1 Alizia Amanda Katie B. Mark Salma Valerie	Team 2 Curtis Kristine Natalie Nobis Trassy
Team 3 Alyssa Angela Maggie Myriam Sarah	Team 4 Katie C. Danielle Emily Jeremy Katie R.
Team 5 Changying Jake Kathy Said Verlena	

Figure 6. Making Connections/Visual Concept Map Activity - Instructor Directions

Figure 7. Making Connections/Visual Concept Map Activity - Student Examples

The small group is asked to select a spokesperson to share their map with the large group. These intentional and focused group discussions increase understanding of the content and create shared learning. The examples in Figure 7 show how five different groups used different tools to depict how the terms were related.

Making Personal Connections

The beginning of a synchronous class can be an ideal time to work on building community with learners. One strategy to help students make connections with one another is to have them share something about themselves using a virtual wall application. As students join the synchronous meeting, the instructor poses an opening question with a link to a virtual wall (see Figure 8). The prompt asks them to share something about themselves.

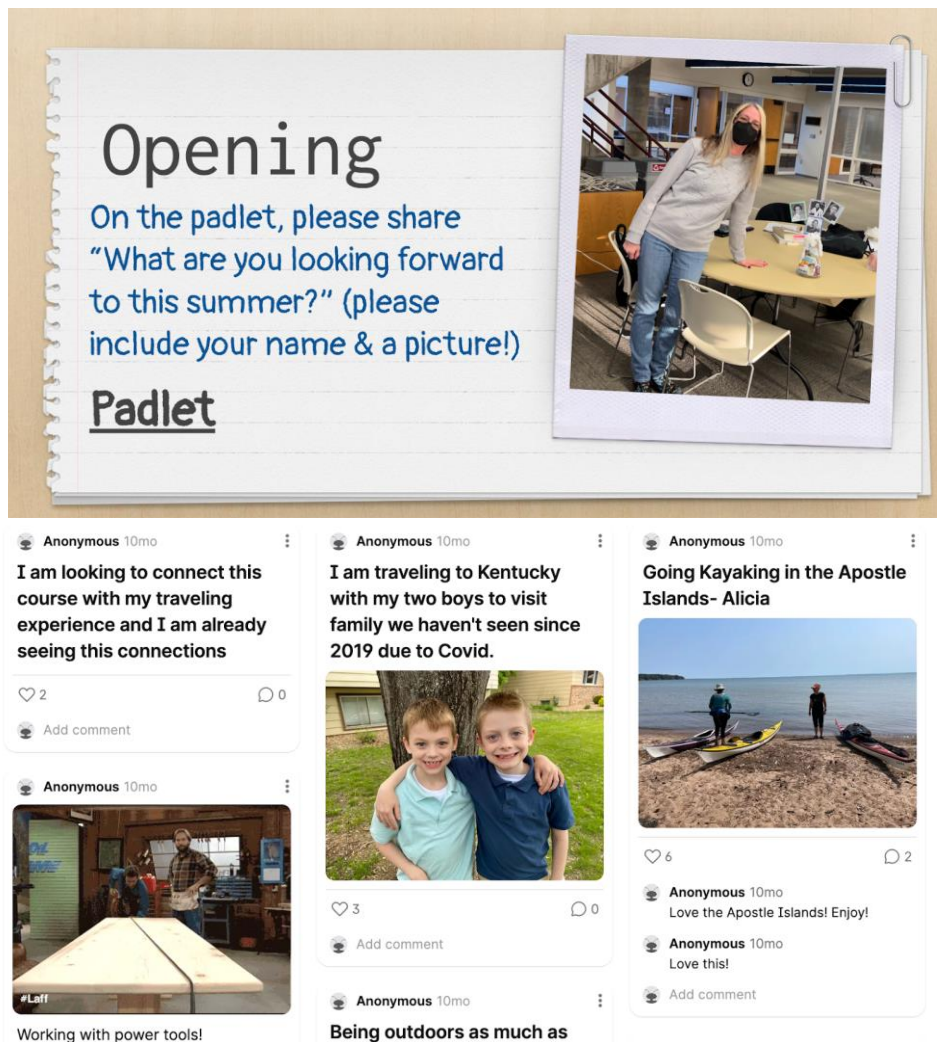


Figure 8. Making Personal Connections: Opening Activity/Padlet Sharing Example

In this example, students were asked to share what they were looking forward to in the summer. The Padlet link

allows students to post pictures and comment on each other's posts, which serves as a way to get to know one another. In the example (see Figure 8), students shared pictures of their families and explained upcoming trips. This type of sharing builds a sense of community among learners.

Snapshot Team Builder

The activity, Snapshot Team Builder, is similar. As students come back from a break during the synchronous session, they are asked to post a picture from their phones to a Padlet board, Jamboard or Google Slide/Document. This type of sharing helps learners to get to know each other beyond the classroom, and it typically adds some light-hearted humor to the class as well.

Prepare during BREAK... "Share the 5th most recent photo on your phone..."



Figure 9. Snapshot Team Builder Example

Choose a Visual: Reflect and Connect

Creating a sense of fun and purposefully carving out time for students to reflect on personal and professional well-being is important. It connects students through similar experiences and opens up another avenue for getting to know each other. The strategy, Choose a Visual: Reflect and Connect, is used to either open class or as a regrouping activity after break; it can be connected to specific content or to a more generalized look at life.

To complete this activity, when students return to the synchronous session after a break the prompts are on the screen along with a note to think about their last week personally and professionally, to decide which statement

best describes it, and to be ready to share why they chose that statement. After an allotted time, the instructor gives students the option to share which statement they chose and why they chose it. It is not necessary that all students share, but many may feel compelled to as they make connections to their peers who either chose the same statement as they did or share something about their last week that resonates with them because of similar experiences. This sharing is an opportunity for students to see the human side of their fellow classmates and to support one another. It creates a space where all students are engaged, because even if they do not share their selected statement and rationale publicly, they have been given concentrated time to think about their choices prior to the question prompt being asked in the full group. The final step is for the instructor to share the visuals that coincide with each statement.

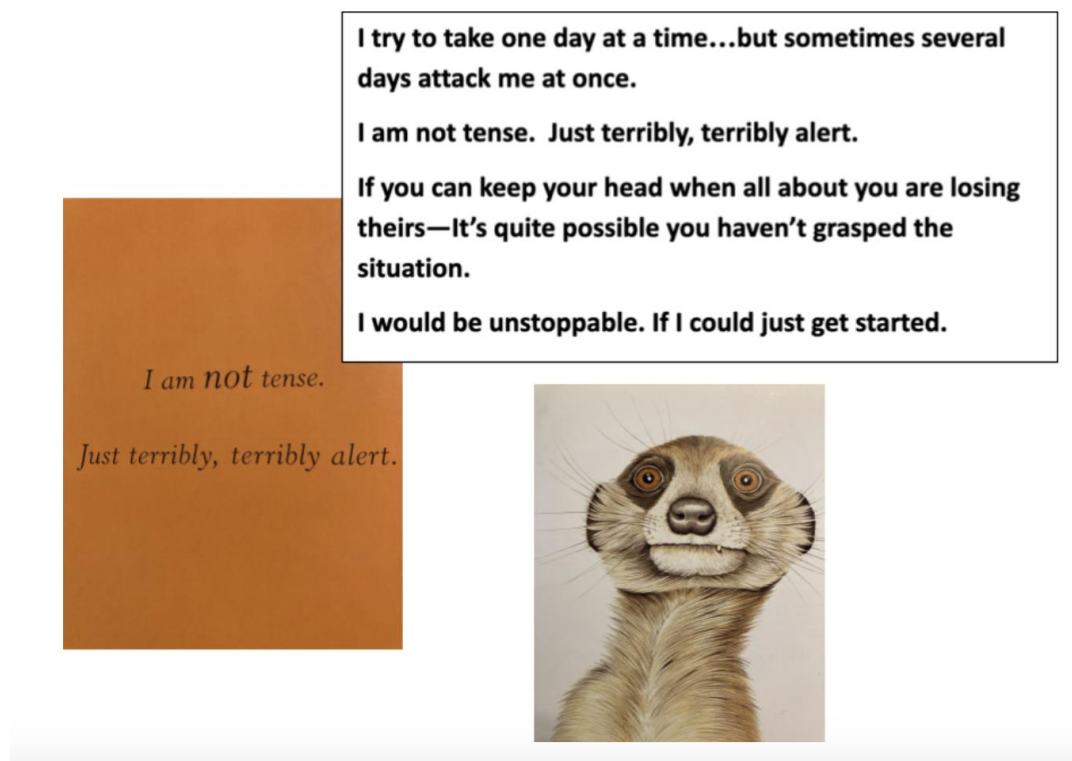


Figure 10. Choose a Visual: Reflect and Connect Example

The visuals used in this example are from a small coffee table book entitled *Furry Logic* (2014), but other statements with connected visuals could also be used. As visuals are shared the humorous nature of them inevitably results in laughter and statements such as, “OH, that is TOTALLY me.” It is a fun yet meaningful way for all students to reflect on their personal and professional experiences, to learn about others, and to enjoy laughter with other members of the learning community.

Plus, Delta and Question Student Feedback

Asking students to provide feedback can also create a sense of shared community. In this example (see Figure

11), students are given a link to a form that collects Plus, Delta, and Question data. The Plus data refers to things that went well during class, the Delta data refers to opportunities for improvement, and the Question data provides students with a chance to ask any question(s) they may have about the course.

The most important part of this activity is addressing, responding to, and sharing the data that is collected. Sharing the raw data or sharing themes from the data with the students has the potential of opening up powerful classroom conversations. Instructors build a sense of community by demonstrating responsiveness and openness to this student feedback.

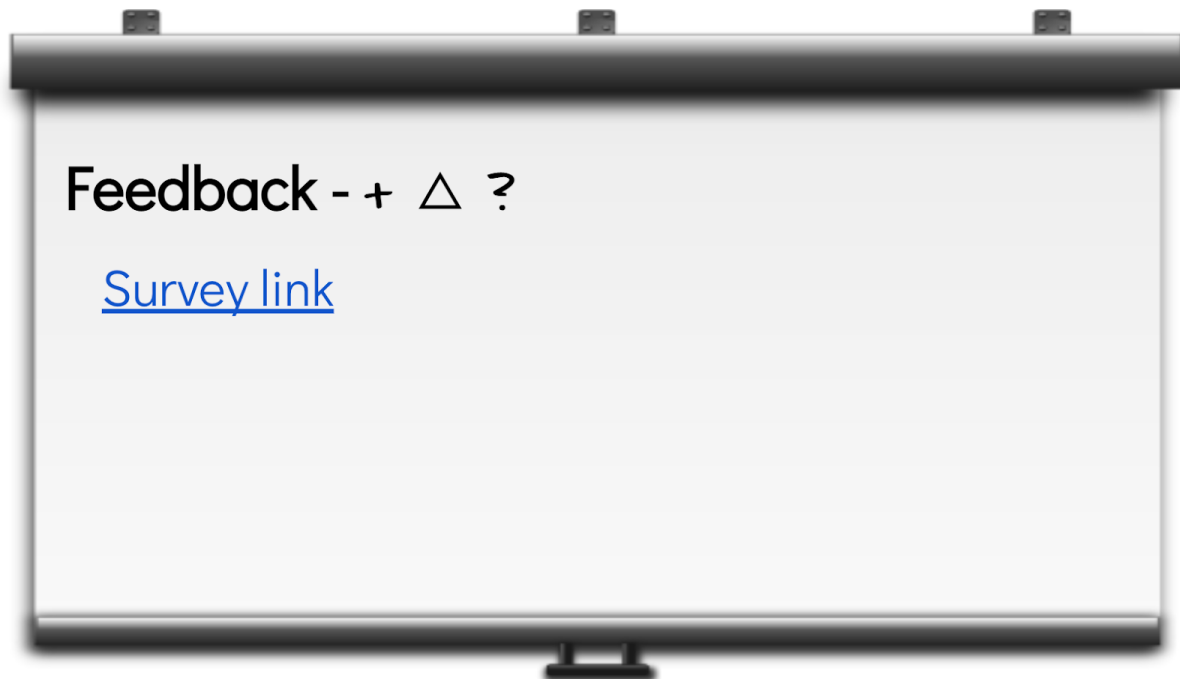


Figure 11. Plus, Delta and Question Student Feedback Example

Walk and Talk

Synchronous teaching and learning do not have to be sedentary endeavors. Providing opportunities for movement can invigorate discussion and build community. The walk and talk activity during a synchronous class meeting can break up the time and provide a way to cultivate stronger relationships between students.

To begin, the instructor creates groups with two students per group, and then asks students to share phone numbers in a safe way or encourage them to use a google voice phone number. Next the instructor provides the students with a prompt/question to discuss during this walk & talk activity. Instructors should encourage students to go outside or walk in their home, or wherever they are attending class. The instructor is responsible for providing a substantive amount of time and a discussion prompt that is engaging. The prompt can be content-based and/or something to promote community building (see the example in Figure 12).

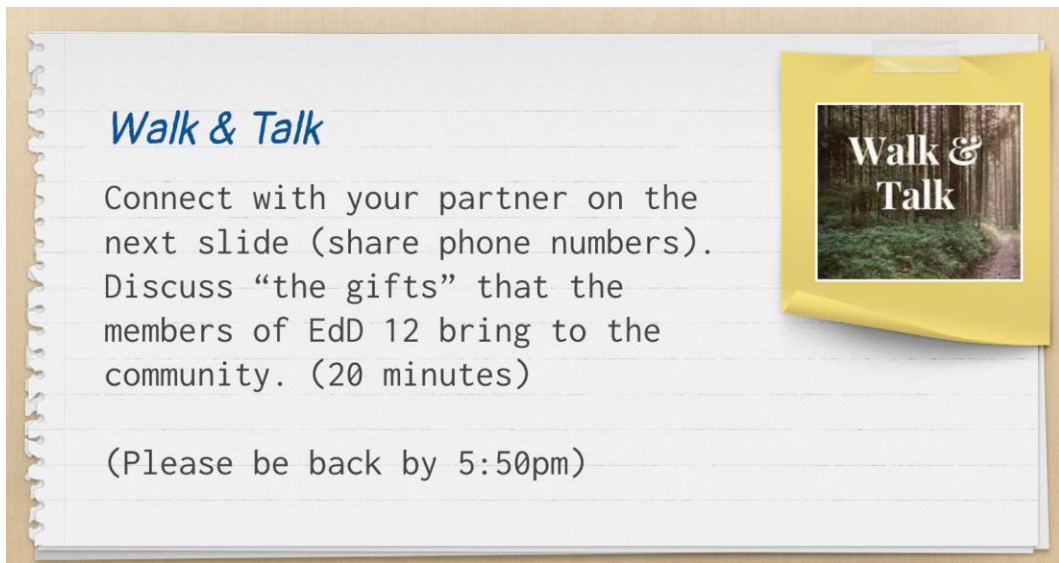


Figure 12. Walk and Talk Example

Memes and Timers Strategic Breaks

One strategy for managing breaks during a synchronous session is to post a YouTube video with a timer; this can help students make sure they are back in class at the appropriate time. To build community, instructors can post questions or prompts for students to answer in the chat upon their return. Another option (see Figure 13) is to post pictures of memes with "pick your favorite" choices for students. Students post responses in the chat. This quick sharing of likes and preferences is a light-hearted way to build a sense of community.

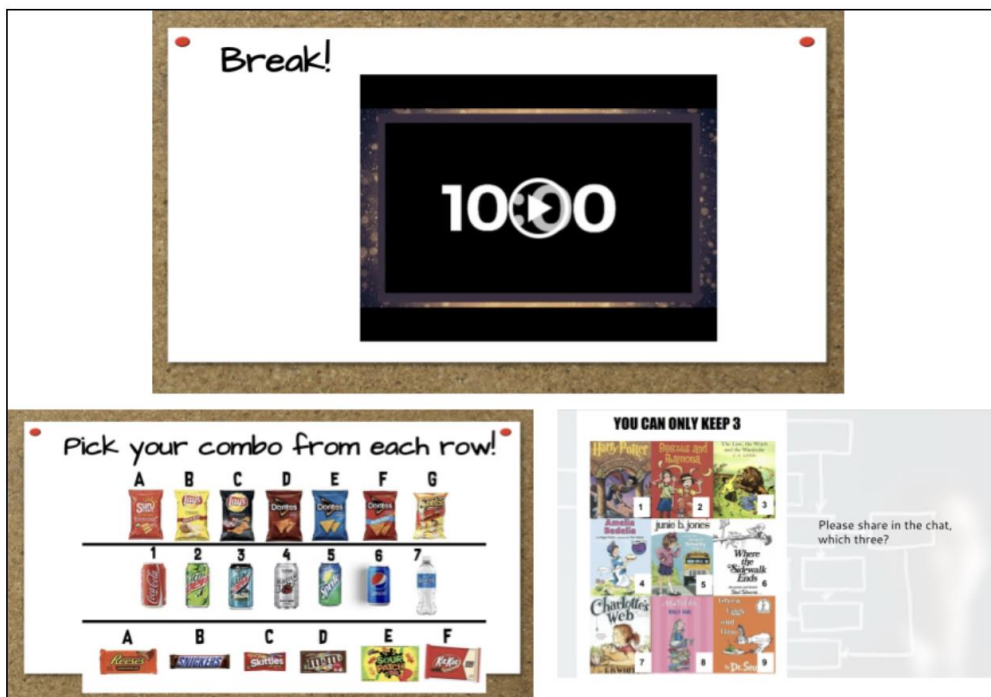


Figure 13. Managing Breaks Examples

Class Opening



Opening - Gender and Org Culture

From the Mill's reading, please share one "aha" and/or new learning.

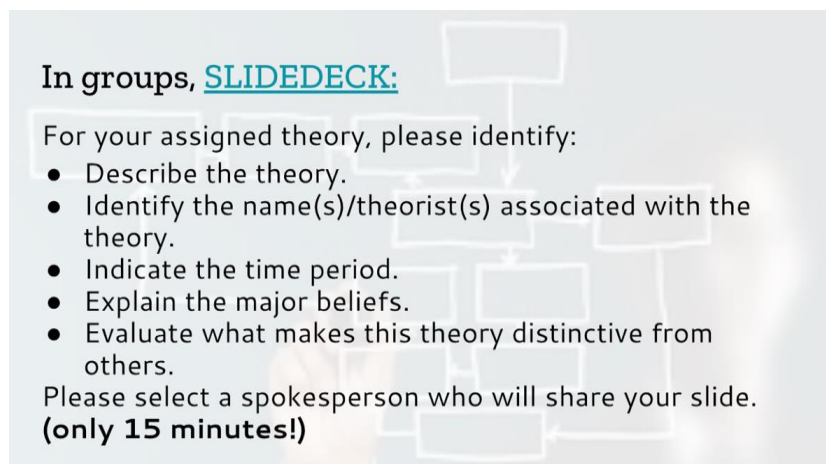
Alyssa	Tracey
Emily	Maggie
Kristine	Jeremy
Nubia	Jake
Myriam	Katie C.
Salma	Alicia
Sarah	Danielle
Kathy	Changing
Curtis	Verlena
Mark	Amanda
Said	Natalie
Angela	Valerie
Katie R.	Katie B.

Figure 14. Class Opening: Large Group Sharing Example

Instructors can use the beginning of class to build community while also making strong connections with the course content. In Figure 14, students are asked to share an “aha” or new learning from a course reading. The instructor posts a list of students' names with the opening question (on the slides and in the chat). In this activity, everyone has a chance to share (without pauses or raising hands virtually). The instructor also has an easy way to take class attendance. [TeamShake](#) (Rhine-O Enterprises, 2020) is a great application for creating groups and lists of students, because everyone has an opportunity to share and everyone’s voice is represented in the discussion.

Assigning Tasks to Group Discussion Time

When students are moved into small groups during synchronous sessions, one way to make sure the discussion stays focused on the task is to assign a way to report what is discussed. For example, in Figure 15, students are given a task to complete and a link to a slidedeck to capture their work.



In groups, [SLIDEDECK](#):

For your assigned theory, please identify:

- Describe the theory.
- Identify the name(s)/theorist(s) associated with the theory.
- Indicate the time period.
- Explain the major beliefs.
- Evaluate what makes this theory distinctive from others.

Please select a spokesperson who will share your slide.
(only 15 minutes!)

Figure 15. Assigning Tasks to Groups Example

The more specificity that the instructor assigns with the tasks and products, the more effective this group time can be. If students do not have to share a product, it is still recommended to ask each group to select a spokesperson to share highlights of the conversation.

Individual Centering

Providing students time to transition, reconnect with the readings and discussions they were part of prior to the synchronous session is important. Individual Centering does both (see Figure 16). When students return to class after a break a writing prompt is on the screen. The prompt immediately creates focus and an intentional interaction with the content. After providing several silent minutes to individually respond to the prompt, the instructor welcomes students back to the synchronous session and asks that they have their list next to them as they listen to and view an excerpt from a children's book or other text.



On a sheet of paper-or electronically-please record 5 words or short phrases you associate with the constructivist theory.

<https://voicethread.com/share/20273779/>

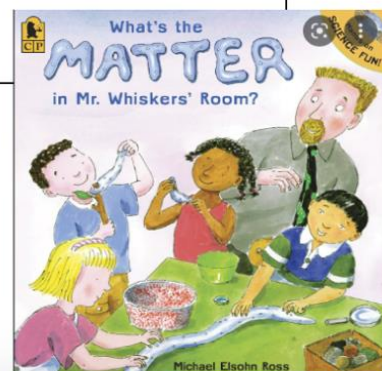


Figure 16. Individual Centering

Once the excerpt is finished the instructor asks students to share which of their words/ideas were present in the book and what else they noticed connected to the initial prompt that perhaps they had not written down. This

approach leads to effective discussions because all members of the learning community had time to think about the concept in the initial prompt on their own, to expand on that initial thinking through a common read, and to then extend that understanding even further as they listen to classmates’ interpretation of the text’s connection to course content. The images shared here have students centering their thoughts about the educational theory of constructivism. They then listen for their terms/short phrases as they listen to a picture book that illustrates many examples of the theory. After hearing the story, students participate in a large group discussion about the theory, with their initial list and specific examples from the book anchoring their contributions to the discussion.

Light Bulb Reflection

The Light Bulb Reflection is an opportunity for students to individually access and share a major learning moment. When asking students to identify this the instructor should share the guiding questions before they begin reading/viewing/listening to a content resource. This activates and focuses student attention and gives them purpose for the assignment. Note that in Figure 17, the question “What is/was my light bulb moment?” is presented third in the list of question prompts. Its placement is purposeful in that the previous two questions are scaffolded from “we” as a whole in “Why did we conduct this analysis?” and does not require the students to have read the passage. It relies on the student’s background and inference skills. The second question, “What does this exercise tell me about myself?” does rely on accessing the resource/s and propels the student to self assess their interests, understanding, and purpose. Finally, the light bulb question transitions the thinking to realization and inspiration often in connection to the student’s personal, academic, and professional interests.



Assignment:

- After reading or viewing, consider
 - Why did we conduct this analysis?
 - What does this exercise tell me about myself?
 - What is/was my light bulb moment?
- Post and Respond to at least two group mates’ responses.
 - Be sure each member of the group has a response from a groupmate.
 - The bigger question: What’s the message?

Figure 17. Light Bulb Reflection Example

Photo Connection

Another way to create a light bulb moment is to use metaphor. In Figure 18 students were asked to find and post a picture that represented their individual “aha” or major learning from the course readings. The use of metaphor is a higher level thinking skill that requires the learner to show their understanding and then provide a rationale

for their photo selection. For example, Figure 18 shows three different examples, including a photo of the Pando Forest in Utah which is the largest organism on earth which is comprised of thousands of trees all connected through one root system. The student explained why they chose the image, how it connected to their content learning, and its representation of broader ideas. They shared, “I think if we as human beings saw one another as interconnected like this grove of aspens are, we would treat each other with a lot more generosity and compassion” (Moroz, Harvey & Carlson, 2022, p. 78).



Figure 18. Photo Connection Example

Conclusion

Good synchronous online class sessions are intentionally designed. The strategies shared here integrate the cognitive, social, and emotional elements and provide space to cultivate and sustain a sense of community. Such strategies are active, meaningful, heighten content learning and its application, and deepen critical thinking. It is our hope that facilitators of online learning, with a strong growth mindset in place “reflect and analyze their own online planning and teaching through these new or differently understood lenses and that this analysis can continue to propel thoughtful, engaged and meaningful instruction and learning” (Moroz, Harvey, & Carlson, 2022, p. 110).

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The Relationship between Nursing Faculty's Psychological Distress with Burnout: Post-Pandemic Faculty Shortage

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Abstract: A nursing faculty shortage across the US, with vacancy rates at 8.8%, is limiting student capacity during a time when future nurses are needed most. Contributing factors, including growing levels of mental health issues, can be seen among nursing faculty, leading to more and more nurses leaving nursing academia. This study aimed to identify associations between psychological distress with burnout in nursing faculty teaching in an undergraduate nursing program. A quantitative design was utilized using a descriptive method with a convenience sample of nursing faculty (n =150) from the southeastern U.S. The Keesler Psychological Distress Scale was correlated with the Oldenburg Burnout Inventory. Regression analysis was used to analyze the data. Psychological distress was reported in 25% of the sample. Burnout was reported in 94% of the sample. Psychological distress and burnout were significantly correlated ($p > 0.05$). Race, gender, and age ($p > 0.05$) contributed to psychological distress. Psychological distress and burnout are key factors contributing to the current nursing faculty shortage. Interventions promoting a healthy mental-wellbeing among nursing faculty are needed. Implementation of mentorship, resources, the inclusion of diversity within nursing academia, and mental health awareness can improve mental health outcomes among nursing faculty. Further research is needed to explore the improvement of mental well-being among nursing faculty.

Keywords: Nursing, Nursing Education, Psychological Distress, Burnout, Nursing Faculty

Citation: Watson, M. (2023). The Relationship between Nursing Faculty's Psychological Distress with Burnout: Post-Pandemic Faculty Shortage. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 89-97), Denver, CO, USA. ISTES Organization.

Introduction

The COVID-19 pandemic will continue to have long-term effects on healthcare and the nursing discipline. As communities try to find a way back to a sense of normalcy post-pandemic, nursing and nursing education seem to be one of the areas that are continually needing to adapt. The pandemic highlighted the importance and need for nurses and nursing educators, but the pandemic also brought about an increasing shortage among key professionals at such a critical time. Nursing schools everywhere around the United States are restricting and limiting student capacity due to faculty shortages (AACN, 2022). A key factor in the nursing faculty shortage can be attributed to psychological distress and burnout. Nursing faculty are more prone to burnout and

psychological distress due to their roles in the response to the COVID-19 pandemic, which added significant stress and emotional exhaustion to their workloads (Sacco & Kelly, 2021).

Psychological Distress and Burnout

Burnout and psychological distress as well as other contributing stressors are important to consider in nursing education and are causes for concern regarding the increase in nursing faculty shortages across the country. According to AACN's report on 2019-2020 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing, "U.S. nursing schools turned away 80,407 qualified applications from baccalaureate and graduate nursing programs in 2019 due to an insufficient number of faculty, clinical sites, classroom space, clinical preceptors, and budget constraints" (para. 2).

Most nursing schools reported that faculty shortages were a top reason for not accepting all qualified applications into their program. Predictors of intent to leave nursing education have included a lack of teaching support. There is limited research that investigates and describes nursing faculty experiences and challenges in their response to the COVID-19 pandemic and what issues arise post-pandemic (Sacco & Kelly, 2021). Burnout and psychological distress have been extensively researched in clinical practice but have received little attention in nursing education and among nursing faculty (Sacco & Kelly, 2021). The following research questions were developed to explore possible associations:

1. What is the relationship between the demographics of BSN undergraduate nursing faculty with psychological distress?
2. What is the relationship between nursing faculty's psychological distress with burnout?

Method

Study Design

The researcher utilized a descriptive method within the quantitative study to investigate the relationship between psychological distress and burnout among nursing faculty. The researcher utilized guidelines from the STrengthening the Reporting of OBServational Studies in Epidemi-ology (STROBE) to report the study. This study was reviewed and approved by The University of Southern Mississippi Institutional Review Board IRB-22-1469.

Setting

Participants were selected from nursing programs in the U.S. The nursing programs were located in Southeastern U.S. As defined by the U.S. federal government, the Southeastern United States includes Alabama,

Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Maryland, Texas, Virginia, and West Virginia (Britannica, 2023).

Participants

The study included a convenience sample of BSN nursing faculty (n=150). In order to meet the criteria to participate in the study, individuals had to be 18 years of age or older and employed at a BSN program within a Southeastern state as full-time nursing faculty. Inclusion criteria excluded nursing faculty teaching in Licensed Practical Nurses (LPN), RN-BSN students, and Associate Degree in Nursing (ADN) programs. The researcher utilized the Student Nurses Association (SNA) and the Southern Association of Colleges and Schools (SACS) to obtain listservs in recruitment efforts. Other methods of recruitment included the utilization of social media platforms such as Facebook and Instagram where advertisements for participation in the study were posted.

Variables

The K6, the Oldenburg, and questions regarding demographics were utilized via an online survey in data collection within the quantitative study. The demographics survey required participants to self-report answers, while the K6 and the Oldenburg required participants to answer Likert-type scale questions. The online survey was input into the Qualtrics platform, which is an online software to collect and categorize data, and resulted in 150 complete response sets. The online survey was available and open to participants for 4 weeks in December 2022. Participants were also offered the option to withdraw from the study at any point should they choose. The survey offered an option to include a participant's contact information if they wanted to inquire about their results within the K6 and the Oldenburg. The K6 and Oldenburg results determine the severity of psychological distress and burnout among individuals. Those participants interested in their results were informed of their scores via email and information regarding what their scores indicated. All of the participants that received their results were also given resources regarding mental well-being. Information provided by the National Alliance on Mental Illness (NAMI) and the National Suicide Prevention Lifeline were included in the resources. The informational email also prompted faculty to reach out to their university's employee assistance programs as needed.

Measurement

The researcher conducted a review of the literature to explore appropriate measurement tools that gauge psychological distress and burnout among individuals. Numerous research studies in the review of literature utilized the Keesler Psychological Distress Scale (K6) and the Oldenburg scale (OLBI). The researcher determined that the K6 and the OLBI were appropriate instruments to include in the quantitative study to measure perceptions of psychological distress and burnout among nursing faculty.

Kessler Psychological Distress Scale (K6)

Numerous research studies have utilized the K6 to measure psychological distress. The K6 was used in this study to measure psychological distress among nursing faculty. Ronald C. Kessler developed the Kessler Psychological Distress Scale to inquire about six manifestations of nonspecific psychological distress over a 30-day recall period (Kessler et al., 2002). The six manifestations are addressed using Likert-type scale questions. Participants' responses include a score of 1 to 5. The response scores are summed at the completion of the survey and will range from scores of 10 to 50. Score ranges will indicate the severity of psychological experienced. Participants that score less than 20 are considered to be well. Participants with scores ranging from 20-24 are likely to have mild mental health disorder. Participants with scores ranging from 25-30 are likely to have moderate mental health disorder. Participants with scores greater than 30 are likely to have severe mental health disorder. Any score over 20 indicates that the participant has some degree or severity of psychological distress (Al-Tammemi et al., 2020). The K6 in this study was found to be highly reliable with an appropriate Cronbach's alpha (6 items; $\alpha = .72$).

Oldenburg Burnout Inventory (OLBI)

The OLBI has been extensively used in research to measure burnout and was utilized in this study to measure burnout among nursing faculty. The OLBI was developed by Demerouti and Nachreiner (1998) and helps to evaluate the severity of job and academic burnout based on exhaustion and disengagement statements (Nedea, 2020). The survey includes 16 Likert-type scale questions and the responses are associated with numbers 1 to 4. The 16 Items are divided into two subscales that further break down burnout into disengagement burnout and exhaustion burnout. At the completion of the survey, the numbers are summed, and the total score will range from 16 to 64. Higher scores indicate that a participant has a greater level of burnout. Scores can be categorized as low burnout, medium burnout, and high burnout. The OLBI in this study was found to be highly reliable with an appropriate Cronbach's alpha (6 items; $\alpha = .82$).

Statistical Methods

Data from the 150 response sets were imported from the Qualtrics platform to SPSS version 27, an analyzing software, for analysis. The analysis included descriptive statistical analysis, univariate analyses, bivariate analyses, and multivariate regression analysis.

Results

The nursing faculty ($n = 150$) were in early adulthood with a mean age of 29.82 years ($SD = 9.42$). The highest percentage of participants selected African American ($n = 103$, 69%), male ($n = 87$, 59%), and married ($n = 82$, 55%). Descriptive statistical analysis was conducted on the K6 and the resulting scores determined that 25% of the participants were likely to have a mild to severe mental disorder. Descriptive statistical analysis was conducted on the OLBI and the resulting scores determined that 94% experienced more burnout.

1. What is the relationship between the demographics of BSN undergraduate nursing faculty with psychological distress?

The study sample (n=150) includes, 58% (n=87) males and 42% (n=62) females, aged 25 to 69 years, and stratified for race – 69% (n=103) African American, 30% (n=45) White, and 1% (n= 2) Asian. The marital status reported by the participants includes 55.03% (82) married, 6.04% (9) widowed, 5.37% (8) divorced, 7.38% (11) separated, and 26.17% (39) single. Descriptive statistics can be found in Table 1.

Table 1. – Descriptive Statistics (n = 150)			
Variable	Level	Frequency (%)	Mean (SD)
Race	Black	103 (68.67)	
	Non-Black	47 (31.33)	
Gender [Q5]	Male	87 (58.39)	
	Female	62 (41.61)	
Marital Status [Q7]	Married	82 (55.03)	
	Others	67 (44.97)	
Age			29.81 (9.42)
Burnout [OLBITOTAL]			39.76 (3.95)
Psychological Distress [K6TOTAL]			17.25 (3.84)
Burnout in categories	Less Burnout	9 (6.00)	
	More Burnout	141 (94.00)	
Psychological Distress in categories	Well	112 (74.67)	
	Mental Disorder	38 (25.33)	

Note: For the variables Race, Marital Status, and Psychological distress, the categories with fewer data points have been merged for analysis purpose.

Bivariate analysis was performed for the psychological distress score variable on an ordinal scale with the sociodemographic and disease variables. A statistically significant relationship at $\alpha=0.05$ was observed with variables – Race, Gender, and Age. Bivariate analysis can be found in Table 2.

Table 2. – Bivariate Analysis				
Outcome Variable	Independent Variable	Test	Test Statistic	p-value
Psychological Distress [K6TOTAL]	Race	Spearman	-0.21	0.0121
	Gender	Spearman	-0.31	0.0002
	Marital Status	Spearman	0.05	0.5652
	Age	Spearman	0.31	<0.0001
	Burnout [OLBITOTAL]	Mantel Haenszel	10.05	0.0015

Note: Mantel Haenszel Chi-square test was performed because both variables are ordinal scale variables

A multivariate regression analysis was conducted between psychological distress and the demographic variables. The multivariate regression model of the total score of Psychological Distress is statistically significant at $\alpha=0.05$ with Gender and Race suggesting that there is a linear relationship between the outcome variable and these independent variables. Multivariate regression analysis can be found in Table 3.

Table 3. – Multivariate Linear Regression Model with Psychological Distress and Independent variables				
Outcome Variable	Independent variable	β	Standard Error	<i>p</i>
Psychological Distress [K6TOTAL]	Gender	-2.45	0.58	<0.0001
	Race	-1.45	0.63	0.0230
	Burnout	0.23	0.07	0.0018
Sample Size (n) = 150				
$R^2 = 0.1860$				

2. What is the relationship between nursing faculty’s psychological distress with burnout?

The total psychological distress score was calculated using 6 items and was observed to range from 6 to 25 with an average of 17.25. A total of 74.67% (n=112) participants reported being well, 24% (n=36) reported a mild mental disorder, and 1.33% (n=2) reported a moderate mental disorder. None of the participants reported severe mental disorder.

The total burnout score was calculated using 16 items and was observed to range from 26 to 55 with an average of 39.76. Higher scores greater than 35 indicate more burnout levels. A total of 94% (n=141) of participants reported more burnout, while only 6% (9) reported less burnout.

Bivariate analysis was performed between psychological distress and the OLBI scale. From table 2, we can see a significant relationship at $\alpha=0.05$ between psychological distress and the OLBI scale. Multivariate regression analysis was performed between psychological distress and the OLBI scale. The multivariate regression model of the total score of Psychological Distress is statistically significant at $\alpha=0.05$ with Burnout suggesting that there does exist a linear relationship.

Discussion

Bivariate analyses indicated a significant relationship at $\alpha=0.05$ between psychological distress and race. With the majority of the study population being African American (69%), we can contribute the study findings to the notion that African American nursing faculty have a higher risk for psychological distress. Research suggests that the adult African American community is 20% more likely to experience serious mental health problems, such as major depressive disorder or generalized anxiety disorder (Vance, 2019). Lawrence et al., (2022) highlighted a study that examined racial and ethnic differences in psychological distress and burnout among faculty and found a higher prevalence of burnout among African Americans (30%) compared to Caucasians

(18%) and Asians (3%).

Bivariate analysis and multivariate regression analysis indicated a statistically significant relationship between psychological distress and gender. With the majority of the study population being male (58%), we can contribute the study findings to the notion that male nursing faculty have a higher risk for psychological distress. Research has highlighted barriers to male nursing faculty as stereotypes, discrimination, higher attrition rates, feminized curriculums, and tokenism (Palmer, 2019). These barriers can increase psychological distress among male nursing faculty. The American Organization for Nursing Leadership (2021) report that male academic faculty report feeling isolated, desire more male role models in nursing academic administration, and need mentors to assist with navigating the unfamiliar environment and culture of academia.

Bivariate analysis and multivariate regression analysis indicated a statistically significant relationship between psychological distress with age. With the majority of the population in the study being in the young adult age range and an average age of 29, we can contribute the study findings to the notion that the young and new nursing faculty are at higher risk for psychological distress. Thomas et al., (2019) highlighted that younger faculty experienced psychological distress and burnout at a higher rate than veteran faculty. The younger and new nursing faculty face many challenges in their professional role that require mentorship, preparation, and adequate support. New faculty stressors can lead to psychological distress and burnout and include demanding course loads, multiple commitments, and a necessity for continuing education in efforts to practice the current research (Shirey, 2006).

Bivariate analysis and multivariate regression analysis indicated a statistically significant relationship between psychological distress with burnout. The linear relationship indicates a positive correlation between psychological distress and burnout, implying that those individuals that experience psychological distress also experience burnout. Bentjen (2019) conducted a study utilizing the Emotional Exhaustion Subscale Score to measure burnout among nursing faculty. The study found high levels of burnout among mid-career nurse educators as a result of the nursing faculty shortage which include factors such as increased workplace responsibilities and challenges with work-life balance. These contributing factors of burnout can negatively affect the mental well-being of nursing faculty and can lead to psychological distress.

Limitations

The Inclusion of a population with only BSN faculty practicing in the Southeastern U.S. can contribute to the limitations of the study. The inclusion of a specific population can cause an external validity threat by limiting the ability to generalize the findings to the larger population of BSN faculty. Another limitation of the study included a sample of mostly male faculty (59%), which may not represent other BSN programs that include more female faculty. Limitations were also noted in the truthfulness and accuracy of participants' responses. The potential for dishonest respondents also added to the limitations of the study. Future research might include a qualitative approach to understanding faculty's perceptions of the experiences with psychological distress and

burnout.

Conclusion

Creating a supportive and positive working environment to promote healthy mental well-being among nursing faculty is vital in addressing the nursing faculty shortage issue (Aquino et al., 2018). Burnout and psychological distress are contributing factors among nursing faculty that can negatively affect the work environment and add to the reasons why faculty are leaving nursing academia. Nursing faculty that are new to academia and are in the young adult age range can be at higher risk for burnout and psychological distress. The average age of nursing faculty in the study was 29, which can be attributed to the theory that nursing faculty are aging out of the profession with increases in nursing faculty retirements. A wave of faculty retirements is expected across the U.S. over the next decade (AACN, 2022).

According to the AACN's report 2021-2022 Salaries of Instructional and Administrative Nursing Faculty, the average age of nursing faculty was 56.6 years. A wave of faculty retirements is expected across the U.S. over the next decade (AACN, 2022). According to the AACN's report 2021-2022 Salaries of Instructional and Administrative Nursing Faculty, the average age of nursing faculty was 56.6 years. Providing effective mentorship and resources to the new wave of nursing faculty can help improve their mental well-being and work environment which can enhance the work experience, leading to intent to stay within nursing academia.

The study revealed that male and African American nursing faculty are at higher risk for psychological distress and burnout. The inclusion of diversity within nursing academia can improve the work environment. A lack of minority nurse educators or male nurse educators may gesture to potential nursing faculty and nursing students that diversity is not valued (AACN, 2022). Potential nursing faculty seeking academic role models to guide them in their academic careers can find it challenging to find mentors and a community of support. Lack of support and lack of mentoring can leave nursing faculty at a higher risk for psychological distress and burnout. The need to attract nursing faculty from underrepresented groups in nursing, especially men and individuals from diverse backgrounds is a high priority for the nursing profession (AACN, 2022).

Addressing the nursing faculty shortage is imperative to nursing education and the nursing profession. Despite fortitudes to combat the faculty shortage in the U.S., contributing factors such as increased levels of burnout, the pace of nurse retirements, and an imbalance in the supply of nursing faculty to nursing students continue to hamper those efforts (Bakewell-Sachs et al., 2022). Interventions and measures such as providing nursing faculty with a healthy work environment can address issues leading to the faculty shortage. The study revealed that stressors such as lack of mentorship, lack of diversity, and lack of mental well-being resources can lead to burnout and psychological distress among nursing faculty. These stressors can be effectively addressed with a collective effort within nursing academia. Preventative measures for burnout among nursing faculty may be the key to gaining the upper hand in the battle against the nursing faculty shortage.

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Exploring the Psychosocial and Behavioral Interventions for Substance Abuse or Misuse and Physical Inactivity within the Low- and Middle-Income Countries and High-Income Countries: A Systematic Literature Review

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Abstract: This paper conducts a comparative literature review of psychosocial and behavioral interventions for substance misuse and abuse (SAM) and physical inactivity in low-middle-income countries (LMICs) and high-income countries (HICs). The review aims to identify similarities, differences, and gaps in interventions across these settings, offering insights into the current state of interventions, best practices, and areas for future research and intervention development. Research suggests that physical inactivity can contribute to SAM through mechanisms such as increased negative emotions, social isolation, and a lack of purpose in life. Studies have found a positive association between physical inactivity and stress, depression, and alcohol consumption. The review emphasizes the need for cost-effective interventions in LMICs, where barriers like high treatment costs and limited healthcare access discourage individuals from seeking treatment for SAM. The study's findings can guide policy decisions and contribute to evidence-based strategies for addressing SAM and physical inactivity. By exploring psychosocial and behavioral interventions, including community-based physical activities and peer-support recovery systems, this research aims to provide insights into effective treatment and prevention approaches applicable to both LMICs and HICs.

Keywords: Alcohol Abuse, Physical Inactivity, Substance Abuse, Motivational Interview

Citation: Gray, M I., Brown, M., Nyashanu, M., & Brown, A., (2023). Exploring the Psychosocial and Behavioral Interventions for Substance Abuse or Misuse and Physical Inactivity within the Low- and Middle-Income Countries and High-Income Countries: A Systematic Literature Review. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 98-108), Denver, CO, USA. ISTES Organization.

Introduction

Substance misuse or abuse (hereafter, SAM) has become very prevalent in both developing and developed countries due to a variety of reasons (Elkholy et al, 2023). Substance abuse (i.e., substance use disorder and addiction) and misuse (i.e., inconsistent use of drugs without following medical guidelines) is the excessive intake of dangerous psychoactive substances, including alcohol and illicit drugs which has negative mental, physical, and financial consequences (Serafini et al., 2015; Reed et al., 2011). The problem of SAM has been exacerbated by physical inactivity within the different populations (within high, middle-, and low-income countries) leading to far reaching impact on health and well-being (Reed et al., 2011). Prior studies highlight how physical inactivity is directly associated with higher levels of stress and depression, which in turn was associated with greater alcohol consumption (Serafini et al., 2015; Reed et al., 2011). The association between SAM and physical inactivity is the wide range of mental health-related problems as it kills the brain's dopamine cells eventually leading to symptoms of psychosis, paranoia, and impaired thinking-related skills like problem-solving and memory (Reed et al., 2011; Garson, Castle, and George, 2023).

In addition, SAM and the lack of physical activity can also cause high cholesterol and an elevated risk of heart disease including weakening the immune system and catalyzing the deterioration of conditions such as HIV and Hepatitis C Virus (Nyashanu et al 2023). This is alarming globally, but especially in LMICs including sub-Saharan Africa that accounts for roughly two-thirds of all adults (18+) with HIV (Vithalani, and Herreros-Villanueva, 2018). Findings from Roberts et al. (2011) identifies the global rise in the abuse and misuse of drugs by young adolescent. Indeed, this situation is even worse in the low- and middle-income countries (LMICs) due to unemployment, and a low level of education which diverts the attention of the young adolescent from abusing or misusing of drugs. Physical inactivity can cause other health problems apart from those caused by using substances (World Health Organization, 2023). Other benefits of physical activities include prevention of obesity and can lead to better health and well-being. Interestingly, the relationship between physical inactivity and substance abuse is also supported by several theoretical frameworks, including the stress-coping model and the self-medication hypothesis (Shin et al., 2016).

Amongst the many proposed alternative interventions, psychosocial and behavioral changes directed towards physical activities seem to be an emerging theme. However, physical activity remains understudied in the LMICs. Psychosocial and behavioral interventions encompass a wide range of approaches that target individual behavior, social, cultural, and environmental factors. These interventions can include cognitive-behavioral therapy, motivational interviewing, community-based programs, policy changes, and educational campaigns (U.S. Department of Health Services, 2018; Shin et al., 2016). Understanding the effectiveness and implementation of these interventions is crucial for designing evidence-based strategies to combat SAM and physical inactivity (Department of Health Services, 2018). The danger is that there is a myriad of barriers to treatment or interventions for people engaged in substance abuse especially in LMICs. For instance, aside intervention utilization being low among young substance abusers in LMICs, which contributes to the substance

abusers' discouraging treatment-seeking behaviors (Sexton et al., 2011), the exact nature of treatment barriers remains relatively unknown (Hahmann et al 2023). Research on the barriers to use of interventions by the affected people researched has shown that there is a great need to re-invent health promotion on the adverse use of substances while enticing substance users to take part in innovative community-based interventions (Stanojlovic and Davidson, 2021). Examples are drawn from the choice of interventions to be used in the treatment and prevention of adverse substance use should include the community's voice, values, and ethos (Eaves et al, 2023). This will enhance ownership of the activity by the community while fostering the principle of sustainability (Eaves et al, 2023). There is therefore the growing need for appropriate treatment and prevention intervention such as community based physical activities (Eaves et al, 2023) and peer-support recovery systems (Stanojlovic and Davidson, 2021). Such interventions are likely to be cheap and cut the treatment budget by a substantial amount of money for both developing countries and developed countries.

Considering the above, this paper seeks to expand the discussions on psychosocial and behavioral interventions for SAM and physical inactivity through a systemic review and better understanding what has been done and seen in some literature with the high-income countries (HICs) and low-middle-income countries (LMICs). This paper will conduct a comparative literature review, aimed at gathering and synthesizing available evidence on psychosocial and behavioral interventions for substance abuse or misuse and physical inactivity in both LMICs and HICs. By examining the existing literature, this review seeks to identify similarities, differences, and gaps in interventions between these two settings. The findings will contribute to a better understanding of the current state of interventions, identify best practices, and highlight areas for future research and intervention development.

This study seeks to explore the alternative treatments being used to reduce the incidence of substance misuse or abuse. Further understanding how lack of physical activity can further lead to health concerns. In the proposed hypothesis, after identifying the lack of studies using physical activity and behavioral change methods such as the stress-coping model as the proposed intervention, the study will review previous studies and data on health coaching and counselling strategies adopted within the HICs and LMICs. The value of these findings will provide alternative treatment methods in the LMICs which are untapped and consequently inform policy decisions. Furthermore, this study is the first step to attaining baseline information on substance abuse and misuse in the LMIC and the associated treatment seeking barriers.

Literature Review

Physical Inactivity

Physical inactivity can lead to alcohol or drug abuse through a variety of mechanisms. One possibility is that people who are physically inactive may be more likely to experience negative emotions such as boredom, frustration, or stress, which can increase the likelihood of turning to alcohol or drugs as a coping mechanism. In addition, physical inactivity can lead to social isolation, which may also increase the risk of substance abuse.

Finally, physical inactivity can result in a lack of purpose or meaning in life, which may contribute to a sense of hopelessness and despair that can lead to substance abuse.

There is evidence to support these associations. For example, a study published in the journal *Health Psychology* found that physical inactivity was associated with higher levels of stress and depression, which in turn were associated with greater alcohol consumption (Reed et al., 2011). Another study published in the *American Journal of Preventive Medicine* found that adults who engaged in regular physical activity were less likely to engage in substance abuse compared to those who were physically inactive (Yarnell et al., 2015). Moreover, the relationship between physical inactivity and substance abuse is also supported by several theoretical frameworks, including the stress-coping model and the self-medication hypothesis (Shin et al., 2016). In summary, physical inactivity can contribute to alcohol or drug abuse through a variety of pathways, including increased negative emotions, social isolation, and a lack of purpose or meaning in life. These associations are supported by both empirical research and theoretical frameworks.

The extent of research has developed several approaches to reduce substance abuse (Bruvold, 1993; Dieterich et al., 2013; Hill et al., 2018). However, methods and approaches used are westernized impeding the treatment-seeking behavior of the substance abusers (Sexton et al., 2011). Aside that, several literatures also report that proximity of health-seeking centers, sustaining of treatments (MacMaster, 2005; Beardsley et al., 2003; Schmitt et al., 2003), fear of losing custody of children or the punishing of the abusers are reasons why treatment-seeking behaviors are low in certain settings (Sexton et al., 2011).

In the LMICs, substance abuse (referring to: uncontrolled alcohol intake and illicit drugs usage) is noted as a huge challenge with the usage of crack cocaine, illicit methamphetamine among other products on the increase (Sexton et al., 2011). However, substance abusers' treatment-seeking behaviors in the LMICs are discouraging (Sexton et al., 2011). A major cause of this is due to the plethora of expensive westernized drugs, which has made the cost of treatment of addicts increased. This has worsened the treatment-seeking behaviors of drug abusers as the majority of substance abusers in LIMCs seek not to be treated. The development of alternative cost-effective interventions to improve their treatment-seeking behaviors in the LMICs cannot be underestimated. Amongst the proposed alternatives, psychosocial and behavioral changes directed towards physical activities seems to be an emerging theme. However, this theme (i.e., physical activity) remains understudied in the LMICs.

Physical Activity is one of the most beneficial things that people of all ages can do to improve or maintain their health (PAGA 2nd edition, 2018). Some physical activity is better than none, and for substantial health benefits it is recommended that adults get in 150-300 minutes of moderate intensity physical activity a week (PAGA 2nd edition, 2018).

There have been many benefits shown through evidence-based research including some such as reducing risk of

certain cancers, brain health benefits, possible improved cognitive function, reduced anxiety, and depression risk, and overall improved quality of life (PAGA 2nd edition, 2018). With all the benefits of physical activity, it has also been shown that physical inactivity can be detrimental both physically and mentally. The case of approaching mental health and behavioral change strictly from a biomedical point of view has been shown to not be as successful when you take into consideration the social and psychological perspectives of well-being Williams, J. E. (2017).

A study done by Calestine et al., (2017) conducted a study investigating the relationship between college student work habits, physical activity, and fitness. The study highlighted a positive association between good work habits, such as time management and goal setting, and higher levels of physical activity and fitness. This suggests that effective work habits may contribute to a healthier and more active lifestyle among college students. It also further helps us to understand the benefits of physical activity in everyday life.

In a study done by Pengpid et al., 2015, 23 countries ranging from low-to-high income were viewed to better understand prevalence and social correlates of physical inactivity in university students. The study was completed with 17,928 undergraduate students located in 24 universities across 23 countries. The study revealed that the prevalence of physical inactivity was 41.4% (Pengpid et al., 2015). The study found that some of the key factors found in low to middle income countries (LMIC) included lack of social support associated with physical inactivity, low beliefs in the benefits of physical activity, low self-mastery, and medium self-control were associated with physical inactivity (Pengpid et al., 2015).

According to Fotherinham, et al., 2000 physical inactivity can contribute to mortality and morbidity in more economically developed countries. One cause of this can be due to lifestyle choices such as computer use (Fotherinham, et al., 2000). Another study completed by Sahar Hamido, Xiuzhu Gu, & Kenji Itoh. (2021), viewed the impact on self-monitoring physical activity and the awareness and behavior of behavioral change in participants. The findings showed that of the 36 participants (7 female) at a university in Japan, participants made more health-conscious decisions and realized they needed to do more physical activities. The participants improved in several areas compared to their pre-study answers. In contrast, the participants' confidence in their health decreased after the study was completed Sahar Hamido, Xiuzhu Gu, & Kenji Itoh. (2021). This could provide further discussion in using peer to peer intervention by way of check-ins on progress toward behavioral change goals. The use of theories and techniques such as self-determination theory and motivational interviewing could reduce ambivalence and increase self-motivation and awareness over time.

According to Roberts, C. et al., (2011) young adolescent drug and substance abuse continues to rise. A randomized control trial (n=3288) done in 63 governmental Australian grade school adolescents provided training to a group of teachers in coaching. A 12 month follow up found that young adolescents who worked with trained teachers were able to lower-levels of alcohol and tobacco use over the course of the study in students who received social skills, social problem-solving skills, and challenging unhelpful thoughts (Roberts, C. et al., 2011). This outcome provides a possible outcome when pairing coaching skills to apply general life

skill training to those in communities that can intervene in behavioral changes to better health and well-being.

Felez-Nobrega et al. (2021) conducted a systematic review of observational studies in the general population, exploring the relationship between light-intensity physical activity and mental health. The review showed a consistent association between higher levels of light-intensity physical activity and better mental health outcomes. Encouraging people to engage in regular light-intensity activities, such as walking or yoga, may have a positive impact on their mental well-being.

This study seeks to explore the alternative treatment seeking behaviors to reduce the incidence of substance misuse or abuse. Using physical activity as the proposed intervention, the study will review previous studies and data on health coaching and counselling strategies adopted within the high-income countries and compare with the LMICs. The value of these findings will provide alternative treatment methods in the LMICs which are untapped and consequently inform policy decisions. Furthermore, this study is the first step to attaining baseline information on substance abuse and misuse in the LMIC and the associated treatment seeking barriers.

Alcohol Abuse

Alcohol use disorders (AUDs) pose a significant public health concern worldwide, necessitating effective strategies for both prevention and treatment. A study by Schober and Annis (1996) focused on gender differences in the barriers to seeking help for alcohol-related problems. Schober and Annis (1996) shows various factors, such as stigma, social norms, and perceived self-efficacy, which can act as barriers to help-seeking behavior. Although these barriers can be gender based, they can also be related to ethnicity barriers, and it is crucial to develop interventions that effectively engage all people.

Another area to consider is organizational barriers. This is shown in a study by Patterson et al., (2012) who explored organizational barriers to implementing alcohol screening and brief intervention in community-based mental health organizations. The study identified challenges such as limited resources, lack of staff training, and resistance to change. In some LMICs the use of community health workers (CHW) is common. An area that CHW could benefit is ways to help using behavioral change in assisting people to overcome AUD. Overcoming these organizational barriers is vital for integrating alcohol screening and brief intervention into routine mental health care, ensuring comprehensive treatment for individuals with co-occurring mental health and AUDs. Martin and Rehm (2012) conducted a comprehensive review of psychosocial treatment modalities for alcohol problems in adults. Their analysis encompassed a wide range of approaches, including cognitive-behavioral therapy, motivational interviewing, and relapse prevention. The review emphasized the overall effectiveness of psychosocial treatments and the importance of tailoring interventions to individual needs and preferences.

Bottlender et al., (2006) conducted a review specifically focused on psychosocial treatment approaches for alcohol dependence. Their analysis included interventions such as individual counseling, group therapy, and self-help groups. The review highlighted the effectiveness of psychosocial interventions and emphasized the

importance of ongoing support and relapse prevention strategies. In conclusion, the literature review presents a comprehensive understanding of the barriers to seeking help for AUDs and the effectiveness of psychosocial treatment approaches. The studies highlighted the relationship between mental health factors, such as depression, and alcohol use, as well as the gender-specific and cultural barriers faced by individuals seeking treatment. As shown in these AUD studies some sort of psychosocial interventions should be a part in a plan of aid are needed to help individuals who have challenges of AUD.

Acierno, Donohue, and Kogan (1994) completed a comprehensive review of controlled studies on psychological interventions for drug abuse. The review examined multiple approaches, including cognitive-behavioral therapy, contingency management, and motivational interviewing. While noting methodological limitations, the review highlighted the overall positive effects of psychological interventions in reducing substance abuse and improving treatment outcomes. One area of emphasis showed the need for continued research to refine and enhance these interventions further for drug abuse.

Methodology

Search Strategy

Through this study the inclusive methods used were based on literature using key words of LMICs, HICs, psychosocial, behavioral modification, alcohol, and drug abuse. Other key terms included were substance misuse and abuse. Demographics were not restricted as the goals were to better understand what methods are being used. The age minimum was 18+ and the use of coaching was searched with few results when it related to SAM. Coaching techniques were found in searches including the use of motivational interviewing, and different theoretical frameworks such as the stress-coping model.

The stress-coping model is a theoretical framework used to explain how individuals respond to stressful situations. According to this model, stress is a state of perceived threat or challenge that requires a person to adapt to a new situation. The model proposes that the way an individual copes with stress can either reduce or exacerbate the negative effects of stress on physical and mental health.

Theoretical Framework

One theoretical framework that has been used in aiding people that struggle with alcohol abuse is the stress-coping model. The stress-coping model involves two key components: stressors and coping strategies. Stressors can be either internal or external events that require an individual to adjust their current situation. Examples of internal stressors include negative thoughts and emotions, while external stressors may include significant life events, such as losing a job or the death of a loved one.

Coping strategies are the methods individuals use to manage and reduce stress. There are two primary types of

coping strategies: problem-focused coping and emotion-focused coping. Problem-focused coping involves actively trying to change the stressful situation by seeking information, planning, and taking action to solve the problem. Emotion-focused coping involves regulating the emotional response to the stressor, such as through relaxation techniques or seeking social support. The use and addiction to alcohol has been shown to be related to stressors both psychological and physiological (Brady and Sonne, 1999). Brady and Sonne (1999), showed that treatment techniques to bring in coping skills, problem-solving skills, and social support can aid in behavioral change.

The stress-coping model proposes that the effectiveness of coping strategies in reducing stress depends on the individual's appraisal of the stressor, their coping resources, and their coping styles. For example, individuals who have strong social support networks and effective problem-solving skills may be more likely to use problem-focused coping strategies, while those who lack social support may be more likely to rely on emotion-focused coping strategies. Overall, the stress-coping model suggests that effective coping strategies can reduce the negative effects of stress on physical and mental health, while ineffective coping strategies can exacerbate these effects. By understanding the stress-coping model, individuals can learn to recognize and manage their stressors in a more adaptive way.

The self-medication hypothesis is a theoretical framework used to explain why individuals may use drugs or alcohol to cope with underlying psychological or emotional distress. According to this hypothesis, individuals with mental health disorders, such as depression or anxiety, may use drugs or alcohol to alleviate their symptoms and improve their mood. The hypothesis proposes that individuals may turn to substance use as a form of self-medication, rather than seeking professional help or treatment for their mental health issues.

The self-medication hypothesis suggests that substance use may provide a temporary relief from symptoms but can ultimately exacerbate mental health problems and lead to addiction. The hypothesis also suggests that effective treatment for substance abuse should include addressing underlying mental health disorders.

There is evidence to support the self-medication hypothesis. For example, a study published in the *Journal of Substance Abuse Treatment* found that individuals with co-occurring substance use and mental health disorders reported using drugs or alcohol to cope with negative emotions and stress (Serafini et al., 2015). Another study published in the *Journal of Studies on Alcohol and Drugs* found that individuals with depression were more likely to use alcohol to self-medicate than those without depression (Bolton et al., 2009). Moreover, the self-medication hypothesis is supported by several theoretical frameworks, including the stress-diathesis model and the dual diagnosis model (Khantzian, 1997).

In summary, the self-medication hypothesis proposes that individuals with mental health disorders may use drugs or alcohol to cope with their symptoms. While substance use may provide temporary relief, it can ultimately exacerbate mental health problems and lead to addiction. Effective treatment for substance abuse should address underlying mental health disorders.

Discussion

The discussion section of this manuscript focuses on psychosocial and behavioral interventions for substance abuse or misuse (SAM) and physical inactivity, with a specific emphasis on current interventions in LMICs and HICs. This paper also addresses some of the barriers to treatment-seeking behaviors and the potential of community-based interventions and peer-support recovery systems. The paper highlighted the negative consequences of SAM, including its impact on mental, physical, and financial well-being. It emphasizes the association between physical inactivity and SAM, with physical inactivity leading to higher stress levels, depression, and alcohol consumption. Additionally, physical inactivity is linked to various health problems, such as high cholesterol, heart disease, and weakened immune systems. The paper underscores the significance of addressing SAM and physical inactivity, particularly in LMICs, where unemployment and low education levels contribute to higher rates of substance abuse.

The manuscript argues that psychosocial and behavioral interventions, including cognitive-behavioral therapy, motivational interviewing, community-based programs, and the use of the stress-coping model as an intervention. These are the areas being considered for intervention in the proceeding proposal in LMICs. These areas are understudied in LMICs, and there is a need for more research to understand their effectiveness and implementation in these settings. Emphasis on the importance of evidence-based strategies to combat SAM and physical inactivity, considering the barriers to treatment and intervention utilization among substance abusers in LMICs.

The manuscript highlights the value of community-based interventions and peer-support recovery systems in addressing SAM. This is the form of intervention typically used in LMICs and providing further skills in behavioral change methods can be beneficial in these settings. It suggests that involving the community and considering their voice, values, can enhance intervention ownership and sustainability. Community-based physical activities and peer-support systems are presented as potentially cost-effective interventions that can significantly impact treatment-seeking behaviors and reduce the burden of SAM in both developing and developed countries.

Overall, this review contributes to the understanding of psychosocial and behavioral interventions for SAM and physical inactivity. It identifies the gaps in research and interventions in LMICs and emphasizes the need for evidence-based strategies to address treatment-seeking barriers and provides a foundation for further research and intervention development, aiming to inform policy decisions and improve treatment methods in LMICs.

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Neologisms-Collocations in the Cognitive Perspective

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Abstract: This study examines the cognitive potential of neologisms-collocations through their semantic features and mechanisms of formation. Neologisms consideration leads us to the mental lexicon concept, the functions of which expand over time to the characteristics of collocability, frequency of usage and contexts. The work covers the nomination mechanisms based on analogy, the process of transition of an expanded syntactic construction to an unextended form, which introduces us to the concept of neologism-collocation, which has signs of a syntactically and semantically integral unit that develops along as the language process develops and reaches semantic and structural stability. This paper considers the features of modern Internet resources that provide up-to-date information about neologisms, and special aspects of their inclusion in existing dictionaries. Much attention has been drawn to the solution of topical issues in this field – the subjective nature of the lexical unit selection, the problems that are solved by using relevant information and the opinion of the language community.

Keywords: Cognitive Mechanisms, Neology, Neologism-Collocation, Semantics

Citation: Arkhipova, E., (2023). Neologisms-Collocations in the Cognitive Perspective. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 109-119), Denver, CO, USA. ISTES Organization.

Introduction

Language, as a means of cognition of reality, reflects the cognitive mechanisms of thinking, and neologisms are the result of the continuous work of the human conceptual system. We can trace the processes of the world cognition by the verbalization of significant concepts, which links the study of language with sociocultural, psychological and other factors of human life. Many scientists (F. Costello, F. Levy, E.S. Kubryakova, G.C. Durham, C.P. Cook, etc.), consider the emergence of neologisms, particularly, within the framework of the paradigm dealing with the issues of cognitive word formation. The relevance of this approach is due to constant changes in the view of the world and the need to describe new concepts.

Modern language text corpora provide users with various tools necessary for linguistic research: lists of examples of usage in a minimal context, frequency lists of words, comparison of collocation profiles of two lexical units, the creation of an author's corpora. Our research was conducted using the Sketch Engine language corpus (2023) and Corpus of Contemporary American English (2023), which provide information on collocability, contexts of use, translation options, synonymy, usage patterns of similar words, etc. Additionally,

they make it possible to conduct a diachronic analysis of lexical units, determining the presence of neologisms and obsolete words.

Method

The objectives of the study involve the use of the following methods: conceptual analysis, conceptual metaphor research method, definitive, component, and contextual analyses. A reflexive analysis of the same composition of a word makes it possible to single out certain signs of the denotation of the word – the seme. The selection of research material is carried out by a continuous sample, followed by the analysis of dictionary definitions.

The material of this study includes neologisms-collocations that have arisen over the past several months and have been recorded in the Internet sources: Cambridge Dictionary (2023), Macmillan Dictionary (2023), Merriam-Webster Thesaurus (2023), Sketch Engine (2023), Corpus of Contemporary American English (2023), etc. These online programs have many advantages, one of which is the constantly updated lists of neologisms.

Results

Own observations and studies of reputable scientists in this field have shown that nomination mechanisms based on analogy include the process of transition of an expanded syntactic construction to an unextended form, which leads us to the concept of a neologism-collocation, which has signs of a syntactically and semantically integral unit that develops along as the language process develops and reaches semantic and structural stability. This paper considers the mechanisms of formation of neologisms, and in particular, neologisms-collocations. The paper analyses the features of modern Internet sources that provide up-to-date information about neologisms and the features of their inclusion in existing dictionaries. New tasks are put forward by new approaches to their solution – the subjective nature of the selection of lexical units is a problem that is solved by using relevant information and the opinion of the language community.

The paper presents observations on the status of neologisms-collocations, which are close in their characteristics to the word, but these units have partial lexical and semantic indivisibility, and are not completely rethought, which preserves lexical divisibility. A neologism-collocation with an N+N structure is a complex sign, integration of two mental entities whose compositionality is based on semantic constants – the meanings of the original words included in the collocation. The semantic content of these constructions can be analyzed by highlighting the semantic features of the nuclear component, which express various semantic relations.

Discussion

Neology as a term has been known since the beginning of the 19th century (L. Mercier, N.M. Yanovsky). I.F. Bourdon and A.D. Michelson defined neology as the vision of new words (Burdon, Michelson, 1865,

p. 271). Active work in the field of lexicography of that time explains the interest in this direction. The constantly updated vocabulary of the language, changes, the originality of the new vocabulary, as well as unresolved theoretical and practical issues created the prerequisites for separating neology into a branch of linguistics. The new branch was engaged in the search for ways to identify neologisms, analysis of the reasons for their appearance, models of creation, principles of their lexicographic interpretation (Gak, 1978, p. 37).

At the beginning of the 21st century, new lexical units are recorded in many dictionaries of neologisms, which have collected unique material for scientifically reliable and objective neography. According to G.C. Durham (2018, p. 1), a neologism is a new word or a new way of using a word and is not yet commonly accepted. To survive its infancy, it must identify a durable, meaningful concept, and the word/usage must be relevant. There are many terms that arose during the development of neology: neolexeme, novation, neoformation, etc. (Kasyanova, 2009, p. 18-19). "Dictionary of linguistic terms" by M.A. Telenkova, D.E. Rosenthal (2022) defines neologism as a word or turn of speech created to designate a new subject or express a new concept. Simultaneously, it is emphasized that after the word enters into widespread use, it ceases to be a neologism. R. Fischer sees them as occasionalisms, which over time are accepted or rejected by the language community (Fischer, 1998, p. 8).

The "Dictionary of Linguistic Terms" gives the following definition: 1. A word or phrase created (arising) to denote a new (previously unknown) object or to express a new concept. 2. A new word or expression that has not received citizenship rights in the national language and therefore, is perceived as belonging to a special, often reduced style of speech (Akhmanova, 2004). N.M. Shansky points to the existence of neologism outside the active vocabulary of the language, which gives it freshness and unusualness (Shansky, 2007, p. 168).

The concept of neologism does not have an unambiguous interpretation due to various factors that determine this concept: the temporal criterion – the relative nature of the designation of time frames calls into question during what period a neologism can be considered as such. Can the term be considered a neologism, if it is understandable only to a narrow circle of people, while a large number of speakers of the language are not aware of its meaning? Additionally, the complexity of its differentiation, for example, with occasional use, makes it difficult to define the concept. One of the main qualities of neologism is the novelty of form and meaning, which is also often subjective – a specialized concept will be new for the average man, while specialists will not consider it as a neologism. Another criterion confirming the status of neologism is lexicographic fixation, which can also not always be considered objective, since compilers of dictionaries may not include a potential neologism due to space saving, personal opinion about the need to reflect this unit in the dictionary, in an attempt to avoid the inclusion of the pejorative vocabulary in the dictionary, etc.

Note that neologisms, unlike archaism, which are added to dictionaries since they can be found in various kinds of texts, are not always fixed lexicographically. Proponents of prescriptivism and descriptivism approach this issue in different ways. The former adhere to strict rules and are not inclined to accept changes. In the case of neologisms, prescriptive dictionaries may either ignore the neologism entirely or include it with labels such as

“undesirable”, etc., and offer what is considered more correct options, while descriptive dictionaries will simply record the innovation along with other lexicographic entries (Balteiro, 2011, p. 283).

Proponents of descriptivism consider the linguistic intuition of the speakers of the language and perceive new trends as a natural process in the life of the language. This contradiction can also be seen in colloquial speech, where the excessive use of abbreviations and neologisms is criticized, which associates them with colloquial speech or with new ways of communication, such as text messaging, and therefore they are not given importance. A theoretical analysis of the literature shows that the denotative theory sees as a neologism a word presenting a new denotation, reality, or concept (Kozyrev, Chernyak, 2004, p. 69). This approach does not consider such factors as novelty, word creation, the desire for expressiveness, economy of nomination, etc.

According to the stylistic theory, neologisms include stylistically marked lexical units, the use of which is accompanied by the effect of novelty. Simultaneously, the very concept of novelty is subjective, for which it relies on a collective sense of novelty, rather than on an individual one. Another approach involves considering the opinions of specialists in the field of linguistics, although it carries many disadvantages: the lack of age, social and professional diversity in the ranks of the participants.

Proponents of psycholinguistic theory define neologism as a unit that has not previously been encountered in the speech experience of a native speaker. This approach is also subjective since it focuses solely on the individual experience of the speaker and makes it difficult to get an objective picture. Many neologisms, created according to the word-formation models of the language already at the moment of occurrence, do not have novelty because they seem familiar to native speakers. Structural theory refers to neologisms exclusively new words from a formal perspective, which contradicts the fact that most of the existing words are derivatives.

According to the type of language unit, neologisms are divided into neolexemes – actually new words, neophrases – combinations of words of different idioms (neologisms-collocations belong to this type), neosemes – new meanings of already existing lexical units. Neologisms can be classified according to the following points:

1. By form: lexical, semantic, phraseological structural types.
2. By novelty: proper neologisms (new formations) and relative neologisms (previously known words and combinations that have received a new sphere of distribution).
3. The method of nomination: newly formed words or ready-made nominations that have entered the language.
4. According to the duration of existence: a single use, neologisms that have entered the language system, neologisms that have lived for some time (Alatortseva, 1998, p. 17-18).

Mechanisms of Formation of Neologisms-Collocations

Many scientists consider the process of neologization as a cognitive process, in which the carrier of cognition – a person – generates new words and meanings. Knowing the world, he realizes cognitive and communicative

needs in the designation of new concepts. The main problem solved within the framework of the cognitive-discursive direction is the answer to the question of what is the role of all language units, categories, models and mechanisms of language for the normal flow of speech-conscious, mental, internal processes of human consciousness. The semantics of neologism is based on a proposition – a structure of consciousness, a unit of knowledge storage, which is a link between verbal and non-verbal representations (Kubryakova, 2004, p. 406-409).

The process of neologization is due to the action of cognitive-discursive mechanisms that underlie the renewal of the language. These mechanisms are divided into cognitive-semantic (semantic neologization), cognitive-derivational (word-forming neologization), cognitive-communicative (neologization determined by intercultural communication) (Kasyanova, 2009, p. 60). The very process of the emergence of new words is due to such cognitive factors as: the emergence of new concepts and their verbalization; clarification, rethinking of already known concepts; rethinking due to cultural and historical factors; cognitive-communicative – arising in the process of mutual influence of linguocultures. Consideration of neologisms leads us to the concept of the mental lexicon, how words are presented and systematized in the human mind (A. Triesman, R.C. Oldfield). R. Jackendoff describes the lexicon as a store of words in long-term memory from which the grammar constructs phrases and sentences. It lists a small chunk of phonology, a small chunk of syntax, and a small chunk of semantics (2002, p. 131).

Over time, the functions of the mental lexicon expanded, in addition to lexical units, it began containing information about collocability, frequency of use, and contexts. Cognitive neology is based on the analysis of changes in the conceptual picture of the world: an analysis of the content of neologisms, their changes over time, classification, etc. The human mind combines the existing mental categories, since it is natural for a person to describe new knowledge through the already known, to use ready-made forms of representing knowledge about the world. According to E.S. Kubryakova, the following word-formation processes consider the mechanism of naming by analogy: using a unique lexical pattern; focused on a specific model; and based on the transition of an expanded syntactic construction to an unextended form (Kubryakova, 2004, p. 49). In our study, we are dealing with the third type since collocations have signs of a syntactically and semantically coherent unit, are formed as the language process develops, and eventually become stable and semantically correct.

The reason for the emergence of neologisms by analogy is linguistic creativity: the uniqueness of extralinguistic experience is questioned, there is a need for capacity, euphony of the statement, which will give neologism the opportunity to gain a foothold in the language. A way to manifest linguistic creativity is to replace a component in an already existing collocation, for example, *time millionaire* (from *dollar millionaire*), as we see, in this case there is no need to create a new cognitive model, an existing collocation is taken and its form is modified, and hence the content. Modern realities and phenomena are often secondary to existing ones, which is also reflected in the language.

Behind the emergence of a new concept, there is always the need to solve a practical problem, which can

subsequently be expanded, changed, or not applied in real life, which happens with the neologism expressing this result. The conceptual system, on the other hand, is continuously updated and developed precisely due to the natural processes of the emergence and disappearance of designations. Establishing a connection between the subject and the language unit that expresses it is an active process of conscious word creation.

Rethinking the previously gained experience leads linguists to the concept of neoconceptualization, where the neoconcept is a new cognitive structure in its systemic connections with the knowledge about the world that is presented in the contextual semantics of neologism (Kasyanova, 2009, p. 36). A new combination of two or more words that often occur together can be considered a neologism. If we perceive a neologism-collocation as a unit consisting of two concepts, the main cognitive function will be their connection, which is not simply the sum of two initial concepts. The information embedded in them will be processed, and the components of the meaning will be grouped in such a way as to express new thought.

Complex neologisms can be analyzed from three different points of view: structural, semantic and lexical aspects. From a structural perspective, three types can be distinguished: the neutral aspect is a combination of two bases without a connecting component. The morphological aspect is a combination of two stems with a consonant or vowel functioning as a connecting unit. The syntactic aspect refers to the combination of different categories of words, including nouns, verbs, articles, adverbs, and prepositions, that appear together and are usually connected by a hyphen. From the viewpoint of semantics, three groups are distinguished: compounds in which the combination of the meanings of two words leads to a word whose meaning can be predicted; compounds in which the combination of words forms a word with a new meaning; and compound words that have lost their original meaning.

The principle of the language economy implies minimizing the quantitative growth of lexical units, which leads to secondary nomination. The asymmetry of the linguistic sign is the reason for the emergence of new lexico-semantic variants, which, in turn, changes the semantics of the lexeme and its pragmatics, since the number of situations in which its use is possible increases. Metaphorization occurs due to the replacement of the original differential semes with new ones in the presence of a common seme. Metaphorical transfer occurs on the basis of the commonality of visual or associative features.

Let's analyze the stages of changing the meaning of a lexical unit during metaphorical transfer: *boomerang employee* – someone who goes back to work for a company they have already worked for in the past. Cambridge Dictionary gives the following definition of the word *boomerang* – a curved stick that, when thrown in a particular way, returns to the person who threw it (Cambridge Dictionary, 2023). As we can see, the seme “curved stick” is eliminated, the seme “comes back” becomes actualized and dominant. The metaphor is widely used in the nomination because it leaves room for creative interpretation.

To analyze the mechanisms of formation of neologisms-collocations, it is necessary to consider the examples that appeared in the electronic version of the Cambridge Dictionary (2023). First, note that a new word or term

may be intentionally created (Yule, 2020). Additionally, there are often examples of affixation – a process that involves adding morphemes to an already existing root, for example, *inactivist* – a person who does not believe that political or social change is worth the effort. The neologism is formed by adding the prefix in- to an already existing word. Compounding is a process when two or more words or stems are combined into a single complex, for example, *jobfishing* – the illegal hiring of workers to obtain their personal data or free labor. Word fusion – the formation of a word by merging two or more parts of different words, for example, *romantasy* – a type of book that is part romance and part fantasy. Borrowing is the assimilation of a word from another language. Abbreviation – forming a word by reducing a phrase to initial letters or sounds, for example, *GOAT* is an abbreviation for “Greatest Of All Trips: used to refer to or describe the best, most expensive, most adventurous etc. holiday that someone has ever taken.” A large number of neologisms appear from the components already present in the language, for example, neologisms-collocations – combinations of words that have signs of a semantically integral unit that have recently appeared in the language. Here are examples that have appeared over the past several months in the online version of the Cambridge Dictionary (2023):

Productivity theatre – a way someone behaves at work that makes them appear to be working very hard, even if this is not the case. We know that there is a disconnect between the views of employers and employees on the productivity of working from home. Employees are happier and believe they are more productive; their managers are not so sure. Now it seems, that some of those employees are indulging in what has been termed “productivity theatre”. They make sure their mouse moves frequently – even if they are not working productively – in case their keystrokes are being monitored. They also attend online meetings which do not directly involve them so managers can spot their participation.

Boomerang employee – someone who goes back to work for a company they have already worked for in the past. Returning workers are also more likely to be given short shrift: coming back to a past employer means there is greater pressure to perform compared to new starters. “Although boomerang employees generally tend to be better performers, they’re also more likely to be fired than external hires – managers expect them to know the organization right away,” says Keller. “While new starters may be given the benefit of the doubt, a re-hire not living up to expectations is more likely to be laid off.”

Trip stacking – the activity of booking more than one holiday for the same time period in case one has to be cancelled, for example because of new travel restrictions. Basically, trip stacking refers to the strategy of booking all your reservations – from flights to accommodations to restaurants to activities – for multiple vacations during the same time frame. That way, you have backup options if something disrupts your primary travel plans.

Sunday scaries – a feeling of stress or anxiety experienced by someone on a Sunday before they have to go back to work the next day after the weekend. Sunday is often a chance to catch up with friends, lost sleep, and recover from last night’s hangover. But for many of us, by the time Sunday afternoon rolls around, a feeling of intense anxiety and dread sets in – often referred to as the “Sunday scaries.” It’s hardly surprising the Sunday scaries are

so common. After all, research shows Sunday is our unhappiest day of the week – with Saturday being the peak. There are a number of reasons why the Sunday scaries happen, and how you spend your weekend can play a big role.

Thermal tourism – travel to a warmer country to spend the winter months there in order to avoid the cold weather and higher heating bills in your own country. Tourism operators in Southern European countries are hoping to capitalise on cold winters and energy bills elsewhere on the continent by advertising their warmer climates as winter approaches. Destinations including Greece, southern Spain and the Canary Islands are taking advantage of “thermal tourism”, a trend in Britain for flying to cheaper, warmer climates to escape the winter and the cost of living crisis in the UK.

Nepo baby – the child of an actor, a musician etc. who achieves success because of their famous parent. They would just like to add that Hollywood nepotism is more complicated than it appears, and just because one is born a nepo baby does not mean they aren’t also human beings with emotions and nuanced inner lives as they navigate a harsh spotlight in the social media era and try to live up to enormous expectations (Cambridge Dictionary, 2023).

The emergence of neologisms-collocations, as various neologisms, is explained by the idea that word combinations are a syntactic basis for the transition to more complex units (Arkhipova, 2015, p. 27-30). Objects and phenomena require nomination, in linguistic thinking there is a selection of the necessary lexical unit, a free combination passes into the category of a stable one because collocation components form a ready-made language complex, neologism-collocation finds its place in the language system and is fixed lexicographically.

Semantic Characteristics of Neologisms-Collocations

The semantic content of constructions can be understood by highlighting the semantic features of the nuclear component:

- essential and qualitative features of the object (shape, color, material, etc.);
- the relationship of the whole to the part;
- the feature of belonging and possession;
- functional feature;
- temporal feature;
- locative feature;
- instrumental feature;
- subject feature;
- object feature;
- a feature of the cause/purpose (Lopatina, 2007, p. 28-31).

These features provide an idea of the wide range of semantic relationships conveyed by such combinations.

The psycholinguistic approach tries to determine the mechanisms of perception and establishment of the meaning of these constructions, considering the mental processes that reveal the patterns of combining concepts (E.G. Wisniewsky, F. Costello, etc.).

P. Thagard divides these constructions into those devoid of emotional coloring, used by a person daily (*baked potatoes, phone call*, etc.), and creative, used in the field of science and technology (*magnetic force, steel drum*, etc.) (Thagard, 1997). K. Gagné (Gagné, 2002, p. 551) notes that, when combined, the components of the N + N construction create a new concept precisely during the interaction process of the components. The essence of her ideas boils down to the fact that the perception considers, first, the more characteristic relationships of the construction component in terms of frequency of use, for example, the *spiritual healer* collocation will be more understandable than the *spiritual bath* (a ritual that involves having a bath to encourage wellbeing, with oils, herbs, flowers etc. added to the water and in a relaxing environment, for example with candles and soft music).

Representatives of the cognitive approach analyze various constructions as a reflection of the cognitive structures of human consciousness. The meaning of a language unit is created considering the entire amount of human knowledge about the signified. According to N.N. Boldyrev, to analyze the meaning of a word and a combination of words, it is necessary to establish its cognitive context, structure it in such a way as to understand what components are included in the meaning (Boldyrev, 2004, p. 32). Frames closely interact with each other, and their connection is established through common words in the transition from frame to frame. Language constructions are represented as a scheme that can be filled with any lexical unit. These schemes are built by analogy – formal and/or semantic assimilation of one language unit to another, which facilitates the formation of new knowledge.

The semantically leading and dependent components are distinguished, whose location in the structure is not fixed. The listener is looking for a suitable template for interpreting the construction, but regarding an object or phenomenon without a name, existing words are combined, creating a name in the form of a neologism-collocation. We deduce the meaning of this construct by drawing on knowledge of all known contexts for the use of these units (Ryder, 1994, p. 90).

The analysis of the collocability and merging of the meanings of the collocation components gives impetus to the development of compositional semantics. The combination of signs into a complex is based on a proposition, which is presented in different ways in the language, and is expressed in units of different levels. The mechanism of conceptual integration (Fauconier, Turner, 1998) can be seen in the example of *productivity theatre* – the way someone behaves at work that makes them appear to be working very hard, even if this is not the case. The new meaning is derived from the components based on metaphorical transfer. A neologism-collocation with an N+N structure is a complex sign, an integration of two mental entities. Compositionality implies a certain degree of predictability of the properties of the linguistic units included in the construct.

Conclusion

After analyzing various theories, we concluded that people realize the cognitive and communicative needs in the designation of new concepts. The renewal of the language is based on cognitive-discursive mechanisms, subdivided into cognitive-semantic, cognitive-derivational and cognitive-communicative types. Various interpretations of neologisms highlight their integral characteristics: the effect of the novelty of the denotation designation – semantic and structural novelty, lexicographic fixation, etc.

The emergence of a new concept is always a solution to a practical problem, because of which the conceptual system is continuously updated and developed. The analysis of changes in the conceptual picture of the world is the basis of cognitive neology. The human mind tends to combine existing mental categories. In this study, we deal with neologisms-collocations that have the features of a syntactically and semantically integral unit, they are formed as the language process develops, and become stable over time. Moreover, the connection of two concepts is not the sum of two initial units – their semantic components are grouped in a special manner and form a new unit.

Research in the fields of neology, cognitive linguistics and combinatorial semasiology has made a significant contribution to the study of neologisms, but the problem of lexicographic fixation is still relevant. An analysis of existing Internet sources allowed us to conclude that English dictionaries and electronic platforms, in contrast to other languages, contain extensive information about the origin, meaning and use of neologisms.

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Quebec's Aid to Ireland

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Abstract: The people of Quebec aided Ireland during the Great Hunger in 1847, food shortages of the 1860s, and the Little Famine in 1880. Quebec was part of Canada's entry into international philanthropy. Canadian historians emphasized the impact of famine immigrants in Quebec and British North America in 1846-47, and proposals to send starving Irish to Canada in 1880. There were extensive efforts from Halifax to Winnipeg in 1880 to aid the Irish. This essay focuses on the major fundraising efforts in Quebec, especially Montreal and Quebec, as well as in other communities like Sherbrooke where the bishop sent out an appeal in French to every church in his diocese. What added to the visibility of aid for Ireland was the visit of Irish nationalist, Charles Stewart Parnell, to Toronto and Montreal in early March 1880 who brought out record crowds to hear him plead the cause of famishing Ireland. People of all ethnicities and religious denominations joined this non-partisan and ecumenical movement of the people of Quebec helping the Irish. To quote the St. Patrick's Society, "your Council will further bear testimony to the generosity displayed by the citizens of Quebec and surrounding parishes, irrespective of nationality or religion, in contributing to the Irish relief Fund." (*Quebec Mercury*, 2 March 1880).

Keywords: Quebec, Ireland, Famine Relief, Little Famine, Parnell

Citation: Strum, H., (2023). Quebec's Aid to Ireland. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 120-131), Denver, CO, USA. ISTES Organization.

Introduction

Historians have not studied the aid that the residents of Quebec gave the people of Ireland during the Little Famine of 1879-82. Three times in the 19th century the people of Canada, United States, and Australia came to the aid of the Irish. For example, historians studying the Great Hunger in British North America, like Mark McGowan (McGowan, 2009) studied the impact of famine immigrants on Toronto or W. Douglas Mackay (Mackay, 1990) on the flight of the Irish to Canada. Also, historians concentrating on Quebec, like Marianna O'Gallagher (O'Driscoll and Reynolds, 1988) studied the adjustment of the Irish to Quebec. Even the massive study, *Untold Story: the Irish in Canada*, edited by Robert O'Driscoll and Lorna Reynolds, explored Irish settlement in Canada, not Canadian aid to Ireland. Merle Curti wrote *American Philanthropy Abroad* (1963) a history of American voluntary aid during foreign crises. Canadian historians have not written a Canadian equivalent.

The historiography of Canadian philanthropy is limited. Recent work by Christine Kinealy (Kinealy, 2013) on international aid to Ireland during the Great Hunger briefly mentions Quebec and British North America. Pauline Collombier-Lakeman's (Collombier-Lakeman, 2015) study of the Canadian press and the Great Hunger also briefly mentions Quebec and British North America. Harvey Strum (Strum, 2020) wrote an article on aid to Ireland from the Maritime provinces during the Great Hunger. Similarly, for the Little Famine, Canadian historians, like Timothy Forest "Connaught or Hell," (Kinealy and Moran, 2020) studied the impact of immigration, not Canadian aid as did the leading historian of the Little Famine Gerard Moran (Kinealy, 2020) who analyzed assisted migration to the United States and Canada from 1879-82. D.C. Lyne (Lyne, 1967) researching Irish Canadian contributions to home rule movements in the 1890s estimated that the Canadian government and private philanthropy amounted to \$202,000 with at least \$80,000 in private philanthropy. This essay enlarges our understanding of Canadian, specifically Quebec's aid to Ireland by looking at how the people of the province rose to the occasion and helped temper the food crisis in western Ireland in 1879-80. Concern about Ireland gripped Canadians from Halifax to Winnipeg. Public officials encouraged citizen participation as Mayor Stephen Tobin of Halifax, Nova Scotia asked on 12 January 1880, "What is being done in the matter of the Irish in Montreal?" (Tobin, 13 January 1880).

Aid to Ireland helps us understand the role of Quebec and Canada in international philanthropy. In 1880, Canadians showed no shyness about boasting of the Dominion's generosity. In 1847 during the Great Hunger and during the food shortages in Ireland in the early 1860s the people of Quebec donated to Irish relief. All segments of the population, French, Irish Catholic, Scots Irish, Scots, and Anglo-Canadians gave, and all religious denominations contributed. A Montreal newspaper argued that Canadians gave more "in proportion to the population...than has left the United States" (*True Witness*, 3 March 1880). Competition with the United States spurred Canadians to act, whether in 1847, 1863, or 1880. "A Voice from New Brunswick" a neighbor province, asked on 27 February 1863: "Will you let your American neighbors outstrip you in the good work of charity." (Voice, 27 February 1863). The people of Quebec and other Canadian provinces aided the British Operatives Relief Fund in 1863 to help English workers out of work due to the American boycott of southern cotton during the Civil War. Aid went to France during the Franco-Prussian War in 1870, and people donated for Armenian relief when the Ottoman Turks massacred Armenians from 1894-96. Of course, during World War one Canadians emptied their pockets and opened their purses for Belgian relief and to help the survivors of Ottoman genocide of Armenians, Greeks, and Assyrian Christians from 1915-23.

Repeatedly, the people of Quebec and Canada, like their neighbors to the south, rallied to the assistance of people in distress in foreign crises. In Quebec, and in all of the Canadian provinces public meetings, newspapers, and community leaders stressed that people of every ethnicity and religious denomination participated in famine relief, whether in 1847 or 1880. Americans made the same argument as they described aid to Ireland as a non-partisan, multiethnic, and multi denominational show of united generosity to a people in need. Public meetings in Quebec and Canada stressed Christian charity, ecumenicalism, magnitude of the crisis, common humanity and the plight of fellow British subjects as justifications for helping the Irish. Protestant Canadians viewed the Irish, Catholic and Protestant, as fellow Christians. Many French Canadians in Quebec,

New Brunswick, and Nova Scotia identified with the plight of their fellow Catholics. Some French-Canadians pointed out the importance of the Irish in Canadian society as a reason to assist Ireland. A member of the Parliament of Canada in 1880 Conservative MP Adolphe-Philippe Caron, representing Quebec County, argued Canada had an obligation to assist Ireland because Canada contains “so large a proportion of Irish people who helped build up this country” (House of Commons, 1880).

A new period of food shortages in the west of Ireland in 1879-80 prompted a response from the people of Australia, Canada, and the United States. Food shortages appeared during the Little Famine of 1879-82 putting one million Irish men, women, and children at the risk of starvation. Bad weather conditions in the summer of 1879 produced a potato blight in the west of Ireland. Crop yields dropped to half of those in the early 1870s. Falling crop prices due to international competition and declining prices for kelp as a fertilizer reduced the income of tenants and independent small farmers. Remittances from Irish workers in England and Scotland declined further reducing the ability of residents in western Ireland to purchase food. Before long, forty percent of the population on the west coast faced food shortages, and in some areas, like Connemara, it reached eighty percent (Moran, 1997).

Miss Eyre of Clifden Castle warned, “all over Connemara there was already scenes of harrowing distress.” (O’Neill, 1996) Fearing for their parishioners, 200 Catholic priests noted in June 1879 widespread starvation in the western and southern coasts. Father Griffin in Parke observed the desperate conditions of 500 families in his parish. In Ballina, laborers staged a protest holding up banners, “Our wives and children are starving.” (Dublin Mansion House, 1881) By January 1880, Father Greally in Carna, expressed concern if relief failed to arrive “I fear we will have many inquests.” (Dublin Mansion House, 1881). J. Sullivan reported from Kenmare, the distress in Kerry, “About mid-day there were some 500 to 600 men and women, of all ages, whose faces denoted want and misery, starvation being too plainly imprinted on visages.” (Sullivan, Kirby Papers, Pontifical Irish College, 1880) According to the Dublin Committee, 250,000 people were “without food or the means to buy it,” and another 500,000 “stood on the verge of ruin.” (Dublin Mansion House, 1881).

Responding to the crisis, the Duchess of Marlborough, wife of the Irish Lord Lieutenant, wrote the *Times* (London) on 16 December 1879 suggesting a fund to help the Irish poor leading to the creation of the Duchess of Marlborough Relief Fund. Members of the English aristocracy and Irish lords supported the committee, and it attracted international contributions from Australia, Canada, and United States. In early January 1880, the Mansion House Relief Fund. chaired by Edmund Gray, the Lord Mayor of Dublin, was established to raise and distribute funds impartially. Politicians, public figures, clergymen of all denominations, and businessmen joined the committee providing the prestige to make it the major Irish relief committee attracting international contributions because of its secular non-partisan and ecumenical image. Separately, Catholic bishops in Ireland, like those in Dublin and Sligo, accepted funds raised in Catholic churches in Canada and United States directed to either the Archbishop in Dublin or to individual bishops, like Michael Logue of the Raphoe Diocese in Letterkenny, Donegal.

Then, Charles Stewart Parnell, an Irish nationalist and leader of the Land League movement, organized his own separate relief fund. Parnell traveled to the United States in January 1880 lecturing in sixty-two cities. He spoke before Congress and state legislatures in New York, Iowa, Virginia, Kentucky, and Wisconsin. At the end of his tour in March he reached Canada causing quite a stir in the Irish Canadian community when he spoke in Toronto and Montreal. However, the mayor of Montreal refused to meet with him and rejected a public welcome although Parnell was a well-known figure in Great Britain, United States, and Canada. Most of the Canadian press opposed Parnell's visit. Viewing him as an agrarian radical and a threat to the unity of Great Britain. To Canadian editors and politicians Parnell's advocacy of land reform and home rule bordered on sedition and might encourage another Irish rebellion for independence. Politicians and editors believed Parnell "has acted the part of a demagogue and insulted the Queen and the British government." (*Evening Post* (Montreal), 8 March 1880) Editors expected Parnell to fail in Canada and predicted that while Canadians would donate to Ireland "very little of it will find its way into the hands of Mr. PARNELL." (*Saturday Budget* (Quebec), 13 March 1880).

However, Parnell appealed to "the people of the Dominion to assist in saving lives" by establishing relief committees in "every city and town in the Dominion" and send funds to his Irish Relief Fund. ("Appeal," *Daily Telegraph* (Saint John, New Brunswick), 29 January 1880) Parnell's appeal worked in Toronto and Montreal and among Irish Canadians in Ottawa and Quebec. When Parnell approached Montreal Irish Canadians organized a torchlight parade with six thousand torchlights and fifteen bands to welcome the unofficial "King of Ireland." Over 20,000 people celebrated his arrival on 8 March 1880. A contemporary Irish reporter, Timothy Healy, who accompanied Parnell, remembered that: "All houses were illuminated. Thousands of cheering citizens, French and Irish, greeted Parnell." (Healy, 1929) Due to limitations on his schedule and a snap election in England Parnell could not accept invitations from Irish Canadians to speak in Ottawa and Quebec. His separate Land League attracted donations from Irish Americans and Irish Canadians. Many Irish Canadians rallied to Parnell's cause and organized chapters of the Land League movement.

Quebec's Response

The people of Quebec joined in the campaign of international philanthropy as Canadians from Halifax to Winnipeg donated to Ireland. According to the circular letter sent by the Bishop of Sherbrooke on 18 January 1880, "Vous avez déjà appris, par les détails qui ont été publiés sur les journaux, que nos frères d'Irlande sont dans une très-grande détresse." (Lettre Circulaire, Antoine, 18 January 1880) Appealing to fellow Catholics in his diocese he noted the widespread knowledge in the public press about the distress of the brother Catholics in Ireland. He called on the Catholics of his diocese to donate for Ireland in their churches at the beginning of February. Some of the funds raised went to the bishops in Ireland and some to the local Irish relief committee for forwarding to the Mansion House Committee in Dublin.

Mayor Edward Gray of Dublin, acknowledged the generosity of the residents of Sherbrooke, expressing his desire "to convey to the citizens of Sherbrooke the grateful thanks of this committee for their kind contributions

towards the distress in this country.” (Sherbrooke *Weekly Examiner*, 4 May 1880). Members of the Sherbrooke ecumenical community first met on 16 February at the City Council rooms to organize the relief committee. Dividing up the work, subcommittees were established by wards. A separate subcommittee canvassed Lennoxville, Ascot, and Capelton. The general meeting elected M.T. Stenson and H.W. Mulvena as joint secretaries, William White, vice president, T.J. Tuck, treasurer, and Thomas Logan, chairman. Logan donated the largest amount, \$100. Most donations averaged one dollar, like those that came from Pierre Couture or Mrs. Thomas Rawson, reflecting that aid to the Irish emerged as a people-to-people movement, and not just a public grant from the Canadian or Quebec governments. On the behalf of the committee, Treasurer T.J. Tuck sent \$715 from Sherbrooke to the Mansion House Committee in two installments. As an example, Tuck noted: “please find one hundred pounds being the first installment from Sherbrooke’s contributions.” (Tuck to Lord Mayor, 11 March 1880, Dublin City Archives).

While the Mansion House Committee became the primary organization that the people of Quebec gave their donations to it was not the only group collecting funds. The Duchess of Marlborough’s committee attracted the support of some of the residents of the Eastern Townships of Quebec. For example, George Carter, the Mayor of Danville, collected money from the citizens of Danville and Shipton. The Duchess of Marlborough acknowledged “with heartfelt thanks” money sent by the “Protestant inhabitants of Danville and Shipton to aid of the Irish Relief Fund. (Duchess to Carter, 19 April 1880, Sherbrooke *Weekly Examiner*, 4 May 1880). This was unusual in the specific reference to religious denomination since the mantra for Quebec’s and Canada’s assistance to the Irish was the people of the province and the nation gave without distinction of race, creed, or nationality. Canadians and their American neighbors stressed the theme of ecumenical contributions during the Great Hunger in 1846-47, food shortages of 1861-63, and the Little Famine in 1879-80.

“All classes, creeds, and nationalities” can contribute to Irish relief, resolved the citizens of Quebec in a meeting held at City Hall on 20 January 1880. (Montreal *Herald*, 21 January 1880) Clergymen of all the major Protestant denominations and the Catholic archbishop of Quebec attended and co-sponsored the meeting. Whether Catholic or Protestant, French, English, Scottish, or Irish ancestry the citizens of Quebec agreed to cooperate because “we the citizens of Quebec in public meeting assembled have learned with heartfelt regret of the suffering and destitution” (Quebec *Mercury*, 20 January 1880) now prevailing in Ireland. Another Quebec newspaper also stressed that “men of every shade of politics or religion met to discuss the situation in Ireland.” (Quebec *Chronicle*, 21 January 1880) Resolutions adopted emphasized the need to help due to the plight of the Irish and the common bond between the people of Canada and Ireland. Citizens stressed common humanity that required everyone regardless of denomination or nationality to aid the Irish. This became reality as contributions flowed from the “citizens of Quebec and surrounding parishes, irrespective of nationality or religion.” (Quebec *Mercury*, 2 March 1880) Father Joseph Henning, pastor of St. Patrick’s Church, reported that contributions came from “all classes, Protestants and Catholics alike, on behalf of the sufferers in Ireland.” (Quebec *Mercury*, 15 March 1880). An event scheduled at the church on St. Patrick’s Day attracted an audience of “not alone a highly influential portion of the Irish population, but also many leading English, Scotch, and French

Canadians.” (Quebec *Mercury*, 18 March 1880) suggesting the ecumenical efforts of Quebec’s population to alleviate the suffering of the Irish.

Actions to help the Irish began with a plea from the Mansion House Committee. A letter came from the joint secretaries to the Mayor of Quebec in early January 1880 informing them that “Lord Mayor, and we have communicated with the chief cities of the Province.” (R.W. Bagot to the Mayor, 9 January 1880, Archives of Montreal) The Irish Committee asked he mayor to solicit aid “from your own people” and contact “people in adjoining cities” to subscribe for the Irish.” (Bagot to Mayor, 9 January 1880, Archives of Montreal). The same appeal letter reached the Mayor of Montreal and other major Quebec cities. Mayor Chambers in Quebec also received a telegram from the Lord Mayor of Dublin: “Distress is increasing. Aid is urgently requested.” (Quebec *Chronicle*, 13 January 1880) The Lord Mayor of London sent a similar appeal: “Distress is increasing, you are urgently requested to send relief.” (Quebec *Chronicle*, 13 January 1880).

The Mayor of Quebec Robert Chambers quickly responded because he simultaneously received an appeal from a group of clergymen, MPs, and MPPs to call a meeting for Irish relief. Mayor Chambers issued a notice on 15 January 1880 for the citizens of Quebec to meet on the 26th at the City Hall. Quebec’s newspapers publicized the meeting and urged citizens to attend because of the plight of the Irish. French and English language newspapers supported the appeal. (Quebec *Mercury*, 19 January 1880) The press stressed the distress in Ireland and Christian benevolence “one of the noblest blessings of the heart.” (Quebec *Chronicle*, 21 January 1880) to explain their readers the urgency of the situation. Newspaper editors requested that all residents donate: “Let every man and woman and child give freely without stopping.” (Quebec *Chronicle*, 14, 16, 21 1880) Prominent members of the clergy and leading politicians, including Mayor Chambers along with members of the Parliament of Canada and the Quebec legislative bodies promoted the cause. Speeches and resolutions sought to motivate the people of the city to work together in this noble cause of charity Residents donated over \$1,000 at the meeting. Quebec’s Archbishop sent an appeal to every priest in the County of Quebec to collect donations, similar to the letter from the Bishop of Sherbrooke. Ward committees solicited donations canvassing the city and suburbs. Mayor Chambers wrote to officials in nearby parishes requesting their cooperation in the cause of Ireland. (Mayor Chambers, 21 January 1880 in Quebec *Saturday Budget*, 31 January 1880). As an example, the villages of Etchemin and New Liverpool donated \$302 “for the suffering poor of Ireland.” (Henry Atkinson to E. Dwyer Gray, 29 January 1880, Mansion House, Dublin City Archives) In those two villages donations ranged from \$100 from Henry Atkinson to twenty-five cents from G.A. La Roche. Contributions came from the wealthy and the poor. An eighty-year-old man gave one dollar and wished he could give more. Quebec raised over \$6,000 for Ireland sending most to the Mansion House Relief Fund and one fifth to the Duchess of Marlborough Fund (Quebec Irish Relief Committee to E.D. Gray, 7 February 1880, Mansion House Relief Fund, DCA).

Montreal

Meanwhile, in mid-December 1879 citizens of Montreal raised the issue of helping the Irish. On 8 December

1879, officers of the various Irish societies met to discuss the Irish famine. F.B McNamee, President of the St. Patrick's Society, chaired the meeting. Representatives agreed to work with the Catholic clergy of the largely Irish congregations, like St. Patrick's and St. Bridget's. (Montreal *Evening Post*, 9 December 1880) Almost immediately after this meeting Mayor Rivard called for a public meeting for 23 December 1879. A citizen's committee of prominent members of the community issued a public appeal to the mayor on 17 December 1879, and Mayor Rivard quickly responded. (Montreal *Evening Post*, 22 December 1879) One of the newspapers emphasized the appeal to the mayor was signed "by men of all creeds and nationalities in our midst, for sympathy for a suffering country is not confined to men of any particular religion or element." (Montreal *Evening Post*, 29 December 1879) Many of the speakers at the meeting were French Canadians and some spoke in French. Men who attended the meeting were of "various races and religions united by the bond of common humanity." (Montreal *Evening Post*, 29 December 1879) Speakers included Catholic priests, political leaders, the Unitarian Minister Rev Dr. Cordner and a Presbyterian Minister Gavin Long. Resolutions adopted reflected "one of the most representative bodies ever assembled in the city, composed of all creeds, classes, and national elements." (Montreal *Evening Post*, 29 December 1879) One of the speakers, M.J.F Quinn observed that "it was pleasing to know that in Montreal the piteous cry had aroused the sympathies of men of all nationalities" including French, English, and Scots. (Montreal *Evening Post*, 29 December 1879). Once again, residents of Montreal repeated the theme heard all over Quebec, Canada, and the United States, aiding the famishing Irish transcended denominational, partisan, linguistic, or ethnic differences. The cause of Ireland in 1879-80 united people across sectarian lines to work together to help a suffering people. This turned out to be as true in Quebec or Nova Scotia as in New York or Illinois.

Pressure built for further action. One of the Montreal newspapers pointed out "the principal cities of the American Union and Canada are actively engaged in this noble cause of humanity, and shall Montreal stand idle, or wait until assistance is too late." (Montreal *Evening Post*, 29 December 1879) Initially, contradictions emerged. While meetings of Irish Canadians and citizens groups met in December for action to help the Irish, local Catholic priests advised Irish organizations on 11 December that they opposed premature fundraising. (P. Dowd, priest, to Gentlemen of the Committee, 11 December 1879, Montreal *Evening Post*, 3 January 1880) A month later the Catholic priests changed their mind and recommended collections. Members of the Mansion House Relief Fund wrote Mayor Severe Rivard in early January asking for immediate help to alleviate the suffering in Ireland. Pointing out that their committee "was without reference to creed or party," (R.W. Bagot Cannon, et al, to Mayor of Montreal, 9 January 1880, Montreal Archives) they sought the aid "of your own people in this good work" (Cannon, 9 January 1880, Montreal) Stephen Tobin, Mayor of Halifax, asked on 12 January 1880: "What is being done in the matter of the Irish in Montreal?" (Mayor Tobin to M.P. Ryan, Montreal *Evening Post*, 13 January 1880) Both the Montreal *Evening Post* and the Montreal *True Witness* established their own Irish relief committees to promote public awareness and donations.

However, when supporters of famine relief asked the City Council for a grant to the Irish, the Finance Committee voted no. (Finance Committee, 20 February 1880, 40-41, Montreal Archives) Committees in Montreal went house to house soliciting donations. Citizens of Montreal filled the gap, but split the funds

between the Mansion House Relief fund, Duchess of Marlborough Fund, Archbishop of Tuam, and Parnell's Irish Land League Relief Fund. Contributions in just two churches, St. Patrick's and St. Ann's reached \$8450 by mid-February. In Montreal, contributions ranged from twenty-five cents to \$1,000. As late as July 1880 donations continued to flow from Montreal to Ireland. Some of the monies sent from the Diocese of Montreal, for example, included \$850, to the Mansion House Relief Fund. (Bishop Bond to Dwyer, 6 July 1880, Mansion House Relief Fund, Dublin) Part of the funds that went to the Duchess of Marlborough Fund came from the Irish Protestant Society. Montreal's Mayor sent over \$1,000 to the Duchess of Marlborough Fund. Because of the widespread support for the Irish and multiple campaigns to help probably \$20,000 reached Ireland from Montreal between December 1879 and July 1880.

Parnell

What added to the excitement in Montreal about the Irish cause was the visit of the rock star of Irish nationalism and the Land League movement, Charles Stewart Parnell in early March 1880. Parnell arrived in the United States in early January and delivered lectures on the Land League, Irish relief, and Irish nationalism in sixty-two cities. Parnell spoke before both houses of Congress and several state legislatures, like New York and Iowa. His presence created the Irish Land League Relief Fund, chapters of the Irish Land League, and his sisters and mother established American chapters of the Ladies' Land League. (Janis, 2015) At the end of his American tour, he traveled to Toronto and Montreal. Many Canadian and American newspapers condemned Parnell for his agrarian radicalism. Some Canadians viewed Parnell and Irish nationalism as a threat to the unity of Great Britain. The *Saturday Budget* of Quebec, however, argued that "we want to hear Parnell" and advocated Parnell speaking in Quebec, but Parnell never made it to Quebec. (*Saturday Budget*, 10 January 1880) Representatives of Quebec's Irish associations met in mid-February to plan a visit by Parnell. Irish Canadians enthusiastically supported Parnell and wanted to see and hear him. A Parnell committee formed in Quebec to welcome the Irishman, but events in Great Britain led Parnell to shorten his stay in Canada.

His visit to Montreal caused controversy. Mayor Rivard refused to meet Parnell and provide a public welcome to the city. Rivard issues a public statement indicating he wanted nothing to do with Parnell's visit and urged fellow residents of Montreal to ignore the Irishman. Montreal's mayor argued that Parnell's visit would be primarily political and not philanthropic, "and his aims do not welcome to the majority of our citizens." (*Quebec Mercury*, 19 February 1880) F. B. McNamee, President of the St. Patrick's Society, Brother Arnold of Christian Brothers, and the editorial staff of the *Evening Post* traveled twenty miles outside the city to meet him and accompany Parnell to Montreal. Irish journalist Timothy Healy, who accompanied Parnell, remembered, "I doubt in the forty-eight years which have since elapsed such a reception was accorded there to any other man." (Healy, 1929, 83) He noted that before getting off the train "we were invested with enormous fur-coats to protect against the March frost." (Healy, 1929) Furthermore, "all houses were illuminated." (Healy, 1929) A torchlight parade of Montreal's Irish organizations, like the Knights of St. Patrick from Lachine, welcomed and celebrated Parnell's arrival. (*Quebec Saturday Budget*, 13 March 1880) According to Healy thousands of French Canadians participated in the welcome of Parnell. The parade included 6,000 torchlights and fifteen

bands. Approximately, 20,000 people joined to welcome Parnell to the city on 8 March 1880. Parnell made the case for the Irish Land League, agrarian reform, and famine relief the next night. F.B. McNamee chaired the meeting and expressed his hope that Parnell's visit would benefit the cause of Ireland. As Healy observed "he met another enthusiastic welcome in a crowded theatre and spoke fervently." (Healy, 1929) To the sound of cheers Parnell claimed, "the people of Montreal are in sympathy with the demands of suffering Ireland." (Montreal *Evening Post*, 9 March 1880) After Parnell's speech, the audience approved a resolution creating a chapter of the Irish Land League Relief Fund for the province of Quebec and elected an executive committee to administer the fund. Emphasizing the popularity of Parnell to Irish Canadians the *Evening Post* reported: "Never since it was built did the Theatre Royal contain such an enthusiastic audience as it did last night." (Montreal *Evening Post*, 10 March 1880) Apparently, after Parnell spoke, he asked Healy to wind up the meeting. Healy referred to Parnell as the uncrowned king of Ireland, and the New York *Herald* published this as the new description of Parnell. Again, due to an election in Great Britain Parnell had to leave Canada disappointing his supporters in Quebec and Ottawa.

Conclusion

Three times in the 19th century the people of Quebec and Canada provided voluntary aid to the starving people of Ireland. During the Great Hunger period in 1846-47, the food shortages of 1861-63, and the Little Famine in 1879-80, residents of Quebec rallied to the cause of Ireland. The people of Quebec stressed the dire nature of the food crises, solidarity with fellow British subjects, Christian benevolence, and common humanity as reasons to help. Some French Canadians stressed helping their fellow Catholics in Ireland. However, repeatedly, in 1847, 1862-63, and 1879-80 the press and public meetings stressed the ecumenical and non-partisan nature of aiding the Irish. Quebec residents of all denominations, whether Unitarian, Presbyterian, Anglican, or Catholic, and members of all ethnicities, whether Irish, French, Scottish, and English contributed to Irish relief. Scots Irish Presbyterians and Irish Catholics joined in the common cause of international philanthropy. Americans tended to stress that they were a people of plenty living in the granary of the world, and republicanism required charity to those in need, themes not heard in Quebec or Canada. Historian Christine Kinealy noted that in 1880 "support from the United States was prompt and generous." (Kinealy, 2013, 290) The same applied to the people of Quebec and Canada. At the time, some of the newspapers in Quebec and other parts of Canada pointed out the generosity of people of Quebec and Canada and did not hide their feelings of pride at their generosity comparing themselves favorably to their neighbors south of the border. According to the Montreal *Evening Post* "Montreal was generous during the cotton famine in Lancashire...and she has a reputation for generosity second to no other city on this continent." (Montreal *Evening Post*, 19 December 1879) Similarly, as another Montreal paper boasted: "Canada does not shout so loudly over her generosity as her neighbors to the south, but her actions are quite as prompt." (Montreal *True Witness*, 3 March 1880) This paper helps fill a gap in the historiography of international philanthropy in the 19th century. Unfortunately, historians have underestimated how often the people of Quebec and Canada joined their American neighbors in helping people abroad victims of natural and human crises and catastrophes.

Acknowledgments

Giles LaFontaine of the City of Montreal Archives kindly provided me with copies of the Finance Committee records.

Moira Hughes, Archivist of the Raphoe Diocesan Archives, Letterkenny, Ireland, sent me copies of 125 letters from the United States and Canada sending donations to Ireland.

Jason King, provided me with a copy of his work *Irish Historiography in Quebec: Irish and French-Canadian Conflict and Conciliation*.

Joe Lonergan, President of the Irish Heritage Quebec, sent me a power point on the Irish aid in Quebec in 1847 as background for this essay.

Pat Moran, archivist at the diocese of Sligo archives in Ireland sent me copies of letters from Canadian contributors to aid famine relief.

Marc- André Moreau sent me a copy of the Circular of the Bishop of Sherbrooke from the diocesan archives.

Russell Sage College awarded me partial funding in the Harder-McClellan Fellowship 2015-2017, Susan Warren Beatty Faculty Award for Excellence in Research, 2019, and Sherman David Spector Faculty Fellowship in Humanities, 2020-2022 that I used for some research expenses.

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Development of an Online OSCE Midwifery Test Package: A Practical Response to Academic Challenges

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Abstract: To developed an educational tool for an online OSCE to evaluate the practice readiness of the fourth-year nursing students. Online professional proficiency evaluation of nursing students can be a valid alternative to traditional methods. We designed a one group pre-posttest study. The 51 nursing students were recruited. We implemented a 3-stage of online Objective Structured Clinical Examination Midwifery Test Package (OSCEMTP). The package covered seven segments which developed to enhance the cognitive capability, clinical capability, and professional capabilities. The Practice readiness questionnaire was developed to assess the nursing students' readiness. Content validity index was 1, and reliability with Cronbach's alpha was 0.79. OSCEMTP contains 7 segments: 1) contraceptive; 2) antenatal care; 3) admission interview; 4) first stage of labor; 5) second and third stage of labor; 6) fourth stage of labor and 7) breastfeeding. Each segment has a scenario, a competency evaluation, and tools box for demonstration of clinical skills. Practice readiness was improved in the post-test ($p < .001$). Performance OSCEMTP should be evaluated across diverse population of nursing students to ascertain its validity. An online OSCE Test package is an education tool to enhance the practice readiness before turning to be a professional nurse.

Keywords: Clinical competency, Midwifery, Nursing Practice, Nursing Students, Online Education

Citation: Xuto, P., Stark, A., Deeluea, J., Amphai, S., Prasitwattanaseree, P., Chaiboonruang, T., et al. (2023). Development of an Online OSCE Midwifery Test Package: A Practical Response to Academic Challenges. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 132-143), Denver, CO, USA. ISTES Organization.

Introduction

The transition from a student of nursing sciences into a nursing professional requires competency in technical

knowledge, clinical skills, and cognitive preparedness (Baker et al, 2021). The practice readiness, which has three attributes, evaluates progression of a nursing student in assuming the role and responsibilities of a nursing professional. The first attribute, cognitive capability asserts the student's competency in effective clinical reasoning, decision-making skills, and situational awareness; while, the second attribute, clinical capability, emphasizes on the student's psychomotor skills, acumen in clinical assessment, delivery of healthcare services and effective time management; finally, the third attribute, professional capability, focuses on solidification of professional identity and ethics in profession of nursing (Mirza, Manankil-Rankin, Prentice, Hagerman, & Draenos, 2019).

Concerns about the adequacy of academic and clinical trainings of nursing students have been raised (Walker et al., 2017; Masso et al., 2022). Research findings suggest that newly graduated students from nursing programs are limited in their scopes and understandings of the three attributes of practice readiness. Institutional support, i.e., implementation of Objective Structured Clinical Examination (OSCE), can assist with strengthening the cognitive, clinical, and professional dexterity of the nursing students. Application of OSCE among nursing and midwifery students have been reported to improve students' effectiveness and efficiency in the delivery of healthcare services and patient-provider communication skills (Barry, Bradshaw & Noonan, 2013; Harden, 2016).

The necessity of social distancing has been a sobering experience and has challenged our technical agilities and resiliencies in developing educational evaluation alternatives to the traditional in-person approaches. Furthermore, advancement of technology and the availability of various educational tools now permit to remotely assess practice readiness of our students. In consequence, we design and developed an educational tool for an online OSCE midwifery Test with the objective of assessing its utility in evaluating the practice readiness of the fourth-year students from nursing sciences. Here, we report the design, development, and implementation of this online educational tool with the goal of sharing our experience with the academic nursing professionals to facilitate the development of such educational tools at their institutions.

Methods

This study was a developmental and implementation design. For the purpose of this study, we develop the online OSCE midwifery competency test and to apply the package as the "intervention" as that was architected by our research team. We designed a one group pre-posttest study and the practice readiness as the "outcome".

Study Participants

A total of 131 students who graduated in May of 2022, were contacted by the Faculty of Nursing at the Chiang Mai University to take part in this study. Of these, 51 (38.93%) consented to participate in the study. If the

participants availed the termination option. They were disenrolled from the study but the practice score from the OSCE test was still offered. The development scheme of our study constituted of three stages: 1) Planning and Preparation; 2) Implementation, and 3) Evaluation.

Planning and Preparation Stage

During the planning and preparation stage, we first analyzed contents of the midwifery core courses which are the required courses for undergraduate students in nursing sciences. We designed OSCE midwifery test package to capture various clinical scenarios in addressing antenatal, intrapartum, and postpartum phases. The final version of OSCE midwifery test package contains seven segments covering the concepts of: 1) contraceptive; 2) antenatal care; 3) admission interview; 4) first stage of labor; 5) second and third stage of labor; 6) fourth stage of labor and 7) breastfeeding (see in Table 1). Each segment of OSCE midwifery test package has three components: a) scenario; b) competency evaluation items checklist and c) tools for demonstration of clinical skills (see in Figure 1, A and B) (Shehata, Kumar, Arekat, Alsenbesy, Mohammed Al Ansari, Ahmed, et al, 2020). The OSCE midwifery test package intended to encourage and strengthen the cognitive ability (critical thinking, decision-making skills, and situational awareness), clinical ability (health assessment, perform activities), and professional abilities (ethical practice) of the test takers. For example, we deliberately limited clinical information in a few of the clinical scenarios to goad test takers to take additional clinicodemographic history and/or to give nursing diagnostic assessment or nursing care (see in Table 2).

For the instrument, we developed a 9-item of practice readiness questionnaire. The content of this 9-item questionnaire was grounded on the concept analysis work by Mirza et al. (Mirza, Manankil-Rankin, Prentice, Hagerman, & Draenos, 2019). The items were developed to assess nursing proficiency of students in four domains of nursing practice: 1) Cognitive ability consisting of effective clinical reasoning, decision-making skills, and situational awareness, (items 3,4 and 8) 2) Clinical ability consists of health assessment and perform clinical skills (items 1,2 and 6), 3) Professional ability includes the ethical practice (items 5 and 7), and 4) the perception of their self-efficacy to practices (item 9). It is a 5-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5). The content validity index of the practice readiness questionnaire was calculated at 1.00. The Cronbach’s alpha reliability of the practice readiness questionnaire was calculated at 0.79.

Furthermore, we developed seven sets of competency evaluation items, one set for each scenario of OSCE midwifery test package. Number of evaluation items varies from 10 to 38, depending on the context of each scenario (scenario 1: 14 items; scenario 2: 14 items; scenario 3: 25 items; scenario 4: 10 items; scenario 5: 19 items; scenario 6: 15 items; and scenario 7: 38 items). Response to each item is categorized as “Yes or No”. A higher score for a specific scenario gets translated to a higher professional skill in that specific segment. The OSCE midwifery practice package overall score can be trichotomized into, excellent nursing proficiency (score range 81-100%), moderate nursing proficiency (score range 61-80%) or need to improve nursing proficiency (score range $\leq 60\%$). Finally, a certificate of successful completion of OSCE midwifery practice package is

issued at the level of excellence or moderate nursing proficiency performance.

Additionally, we developed detailed instructions for student test takers and scoring criteria for assessing students' performances. Furthermore, we drafted an itemized guideline for the supporting IT staff. During the planning and preparation stage, with the support from the IT staff, we uploaded OSCE midwifery practice package into the KC Moodle. The KC Moodle (Modular Object-Oriented Dynamic Learning Environment) is an open-source software (version 3.11) which provides the learning management system to students at Chiang Mai University.

The researchers met with prospective study participants in advance of the testing; during this meeting the researchers explained the purpose of the performance evaluation and details of the operational mechanism of the study. For example, the structure of the OSCE instrument and mechanism of completing OSCE, i.e., use of mobile phone camera with accessibility to the Zoom or the requirements for connection to KC Moodle were explained to the prospective study participants. The students who agreed to be the participants were signed inform consent via the online form. They had the rights to withdraw from our study without any repercussion. The link of personal information and practice readiness questionnaire was provided as the pre-test. The mock test and the test date will be informed.

Implementation Stage

During the implementation stage, we administered two mock OSCE midwifery test as an alpha testing, and the actual OSCE test as the beta testing. The objective of two mock tests were to identify potential unforeseen problems, and to develop corrective algorithms to resolve these problems before the actual OSCE midwifery test package.

Alpha Testing of OSCE Midwifery Test Package

The first mock test was administered to the two members of our research team who were trained and instructed to assume the mind frames of the fourth-year students from nursing sciences. The second mock test was administered to the study participants (n=51). These two mock tests were taken via the KC Moodle and Zoom application systems. During the two mock tests, access to the toolbox application was restricted; this restriction was imposed to reduce the likelihood of finding the answers to questions.

Beta Testing of OSCE Midwifery Test Package

On the scheduled testing day, the study participants were sent invitation to join Zoom via their mobile phones or iPads, 30 minutes prior to the start of OSEC midwifery testing. Microphones were muted to reduce the likelihood of noise distraction and/or verbal exchanges among the test takes. Participants were instructed to enter their Zoom ID systems and login to the KC Moodle via their personal computer workstations or laptops

with camera. Participants were reminded to Zoom record their performances. Participants were given a total of 15 minutes to complete each segment of OSEC midwifery test package and 5 minutes to upload their answers and their video clips into the KC Moodle system. Therefore, a total of 20 minutes was allocated to complete each segment of the OSEC midwifery testing package or 140 minutes to complete the seven segments. Finally, participants were instructed upon completion to turn off their KC Moodle, collect their tools back into their toolboxes, close the sticker bar and exit the Zoom portal. Students were instructed to return their toolboxes to the university, Faculty of Nursing either in person or by secured mailing system. The link of practice readiness questionnaire was provided as the post-test.

Evaluation Stage

This step was followed by assigning members of our research team (evaluators) to evaluate the segments of OSCE midwifery testing package based on their expertise in antenatal, intrapartum, or postpartum in the delivery of clinical services. Before evaluating process, two evaluators in each segment were assigned to five randomly selected recorded video clips of participated in the OSCE midwifery test package. Each evaluator, independent of the other, viewed and scored the performance of students using the standardized checklist. Concordance between the evaluators was assessed using Inter Class Correlation (ICC) statistical techniques (SPSS, version 18). The ICC value of 0.75 was set as a priori value for the acceptable concordance between the two evaluators. In case of ICC values $< .75$, we had planned for a third evaluator to view and score the performance of students; however, concordance values between the pairs of evaluators ranged between .89 and 1. After the concordance values met the criteria, the evaluation all the clips were run on the process.




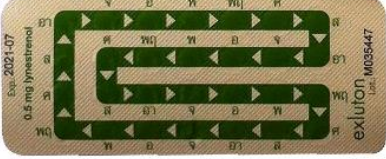
Table 1: Roadmap for an online OSCE test packages

Case scenario	OSC E	OSCE title	Description of activity	Number of items	ICC
Pre-conception	1	Contraceptive	The students acquire to choose an appropriate contraceptive pill to the case (between combined vs minipill) and give the recommendation of how to use.	14	.973
ANC	2	Antenatal care	The antenatal booklet is provided. The scenario needs the student give nursing diagnosis and calculate gestational age, pregnancy due date, and give the recommendation.	14	.993
Labor	3	Admission interview	Clip sound of patient is given. The students need to catch up the necessary in labor unit admission.	25	1.00
Labor	4	First stage	The information in first stage of labor	10	.988

Case scenario	OSCE	OSCE title	Description of activity	Number of items	ICC
		of labor	with external fetal monitoring graph was provided. The scenario needs the student assess 5 P (power, passenger, passage, physiological, and psychological) and give the appropriate nursing care to the case.		
Labor	5	Second stage of labor	The picture of crowning position is provided. The students need to demonstrate the fetal head delivery with safe perineum and modified Ritgen's maneuver. Demonstrate how to delivery when cord around the baby neck.	19	.898
Labor	6	Fourth stage of labor	The information of delivery is provided. The students need to assess, nursing diagnosis and give the nursing intervention to the case.	15	.993
Postpartum	7	Breastfeeding	Breastfeeding in postpartum mother scenario was given, the students need to history taking, point out the problem and give an accuracy therapeutic for the case.	38	.911

Table 2: An example of OSCE test package: Contraceptive

Clinical Scenario	Competency Evaluation	Tools for demonstration of clinical skills
<p>Segment 1: Contraceptive</p> <p>25-year-old woman, Para 1-0-0-1 last 1 year. After giving a birth, she used injection for her contraceptive. Today, she makes an appointment for a contraceptive injection, but she wants to switch from injectable to oral.</p>	<p>1. Please identify what additional question should be asked from this patient.</p> <p>Answer</p> <ul style="list-style-type: none"> • Ask about whether breastfeeding. • Ask for contraindications for the use of combined pills. • Ask how long contraceptives 	<p>Number 1: 21-tablet of combined pills</p>

Clinical Scenario	Competency Evaluation	Tools for demonstration of clinical skills
<p>Physical examination: BW=90 kg, BP=130/80 mmHg, HR=92 bpm</p> <p>Additional background: Currently, children are raised from formula milk. After birth, she had a thrombophlebitis several times. She needs one year for birth control before having the second child. During using injection, she was no menstruation. She received information that if she used injected contraceptive for a long time, she might be difficult to getting the baby, so she needs to switch to the pills.</p>	<p>are needed.</p> <ul style="list-style-type: none"> • Ask for side effects from the use of injections. • Ask the last menstruation. • Ask her experience of using contraceptive pills. <p>2. Please give nursing diagnosis for this woman in this situation</p> <p>Answer</p> <ul style="list-style-type: none"> • Knowledge deficit of the contraceptive pills due to inexperience in using. <p>3. Please select the appropriate contraceptive pill for this woman and give a reason.</p> <p>Answer</p> <ul style="list-style-type: none"> • Choose number 2, a minipill which having only progesterone. • There are contraindications for using estrogen, including venous inflammation, obesity, BW=90 kg. <p>4. Please make the recommendation for the appropriate use of contraceptive pills.</p> <p>Answer</p> <ul style="list-style-type: none"> • Recommend the start date (i.e., start taking your first contraceptive today). • Suggest how to take contraceptive pills (take 1 pill a day at the same time 	  <p>Number 2: 28-tablet of minipills</p>  

Clinical Scenario	Competency Evaluation	Tools for demonstration of clinical skills
	<p>every day, when you complete the 28th pill, start a new pack).</p> <ul style="list-style-type: none"> • Recommended how to take the pill in case of missing one dose (i.e., missing 1 tablet, or missing 2 tablets, or more than 2 tablets). • Recommend side effects (common side effects such as vaginal bleeding, etc.) • Caution is recommended when using contraceptive pills (combination of medications/antibiotics, diarrhea, vomiting may impair its effectiveness in preventing pregnancy). 	



Figure 1A



Figure 1B

Figure 1: An illustration of a toolbox and its content

In Figure A: The necessary tools were provided (1. tools in each segment, 2. blank paper, 3. security shipping seal, 4. return shipping label)

In Figure B: Examples of tools in segment 7 (1. breast model, 2. breast milk storage bag with labelling sticker, 3. towel for breast compression, 4. extra clinicodemographic information).

Ethics and Protection of Rights of Study Participants

This project was approved by the ethics and human subjects committee of the Faculty of Nursing, Chiang Mai University (Study Code: 2022-EXP017; Research ID: 024/2022). The study participants were informed of the objective and the scope of the project. Study participants were fully informed that they had the rights to withdraw from our study without any repercussion.

Data Analyses

Descriptive statistics was calculated. Paired t-test was used. Differences between before and after of the practice readiness were considered as statistically significant at P value of 0.05. If the data comprised non-normal distribution, the Wilcoxon sign-rank test was applied. SPSS version 18 was used in all analyses.

Results

The fourth-year nursing students who enrolled in the research were mostly female (n = 42, 82.35%). Greater than 60% of all participants pass in each segment. (see in Table 3) All components and total score between pre and post-test were statistically significant (p = <.001). (see in Table 4)

Table 3: The performance in each unit of the fourth-year nursing students.

Unit	Excellent Number (%)	Moderate Number (%)	Need to be improved Number (%)	Pass (%)
Pre-conception	12(23.53)	20 (39.22)	19(37.25)	32 (62.75)
Antenatal unit	9(17.65)	26 (50.98)	16(31.37)	35 (68.63)
Labor unit	2(3.92)	46(90.20)	3(5.88)	48 (94.12)
Postpartum unit	1(1.96)	49(96.08)	1(1.96)	50 (98.04)

Table 4: The practice readiness scores and subscale of the fourth-year nursing students.

Score	Range	Pre Mean (SD)	Post Mean (SD)	P value
Cognitive capability	1-15	11.60 (1.92)	13.39 (1.79)	000*
Clinical capability	1-15	11.51(1.85)	13.06 (1.96)	000*
Professional capability	1-10	8.17 (1.21)	9.07 (1.11)	000*
Self-efficacy	1-5	3.98 (0.71)	4.49 (0.73)	000*
Practice readiness	1-45	35.27 (5.00)	40.01 (5.02)	000*

* p < .001

Discussion

The necessity of finding credible methods, alternative to the traditional methods, to assess professional proficiency of nursing students became well pronounced and palpated during the lock down of 2020-2021. In response we designed, developed, and implemented an online midwifery test package to assess skills our nursing students and their readiness in assuming their professional responsibilities. During the alpha testing of OSEC midwifery test package we identified two technical issues and one software flaw. The technical issues were relatively easy to address and rectify; meanwhile, resolving the software flaw required time and collaboration with the Office of Information Technology at our university. Essentially, this flaw in the software, would have permitted for every test taker to complete the OSCE midwifery testing package at the level of excellent or moderate nursing proficiency. Implementation of the alpha testing when developing an educational

software package can be an efficient approach in identifying and resolving the limitations of a software package.

The operational version of OSCE midwifery test package which was beta tested among the fourth-year students from the nursing sciences contained seven segments; we developed these segments to challenge cognitive, clinical, and professional dexterity of our students. For example, we deliberately excluded important pieces of clinicodemographic information from various clinical scenarios to provoke thinking and the best clinical decision making of the students.

Furthermore, the result suggests that the practice readiness score improved on the post-experience online OSCE ($p < .001$). Significant improvements were observed for 4 components: cognitive capability, clinical capability, professional capability, and self-efficacy ($p < .001$). (Table 4) Our findings concur with previous reports stating that the OSCE provides a mechanism to standardize summative assessment across diverse practice (Martin, et al, 2020). Likewise, OSCE is a skill-based assessments to whole care scenarios, in terms of history taking, nursing diagnosis, and applied nursing care. Although online OSCE was applied, nursing process was included as a key component of the OSCE strategy. Moreover, the toolbox is another component which simulate scenario as in the real case, as sitting in front of the mother. As same as the studies of Shehata et al. (2020) that have designed online clinical performance tests.

The OSCE with the use of toolboxes for medical students was applied. The design of clinical performance tests consists of three main stages: 1) planning and preparation the scenario and equipment involved in the test, 2) implement the performance tests through zoom systems, and 3) evaluation the capability of the students. Although the different in case scenario content was observed, the outcome of online OSCE was also influenced in the student performance. This study indicates that online OSCE may be a reliable alternative to enhance practice readiness in clinical competency based acquired (New, Edwards, Norris, 2022).

Conclusion

The next normal era offered an opportunity to explore the possibilities alternative to the traditional methods to evaluate midwifery competency of nursing students. Our team seized this opportunity to develop an online OSCE midwifery test package to prepare our nursing students for their professional responsibilities. As shown in the result that the students' practice readiness was improved on the post-experience online OSCE. Further studies should compare reliability and validity of OSCE and online OSCE evaluations of the student. Additionally, our study suggests that future research may be needed to quantify the impact of online OSCE to other performance of the test taker.

Recommendations

When using the online OSCE midwifery practice package, the instructors should include task-specific-tools for

each segment of the package. For example, in the breastfeeding segment, students should be able to demonstrate the manual pumping and milk collection. Therefore, tools such as a breast model, a breast milk storage bag and sticker for labeling date and time of milk collection should be included in their toolboxes. Furthermore, evaluators should allocate adequate time and effort for reviewing and evaluating the video clips of students' performances; planning for and dedicating adequate time can reduce the likelihood of mental fatigue and therefore bias when assessing students' proficiencies in nursing knowledge and skills.

Acknowledgements

The research team would like to thank you for receiving the grant support from the Faculty of Nursing, Chiang Mai University. (Grant number: 008/2565)

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Establishing the Emotional Branding Strategy for Auspicious Consumption from the Spiritual Well-Being Perspective: Case Study of Thai Digital Auspicious Consumption

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Abstract: Although auspicious consumption has been common in Thailand for a long time. Significantly when it transformed into digital auspicious products and became popular among Thai digital natives. Digital natives perform auspicious consumption as a definition In other words, spiritual well-being is when a person has something as a spiritual anchor to overcome the obstacle in life. Therefore, this research aims to establish the emotional branding strategy for digital auspicious product brands to develop an emotional branding strategy that can reach customers who is the Thai digital natives' motivation, digital consumption behavior including enhancing spiritual well-being to the point. This research applies mixed methods and a case study. Firstly, the findings through literature analysis to identify factors driving the trend of digital auspicious product consumption among the Thai digital natives in Thailand nowadays including 1. The foundation of auspicious consumption in Thai society has been coupled with religious beliefs for a long time. As time passed, the mindsets of Thai digital natives become more auspicious consumption believers. 2. The popularity of consuming auspicious-related content and joining online communities 3. Beginning of a digital transformation in auspicious consumption business to meet the requirements of Thais during covid19. Lastly, to collect the data for establishing the emotional branding strategy is in the on-going process.

Keywords: Auspicious Consumption, Digital Auspicious Product, Emotional Branding, Digital Natives, Spiritual Well-Being.

Citation: Savigamin, P., (2023). Establishing the Emotional Branding Strategy for Auspicious Consumption from the Spiritual Well-Being Perspective: Case Study of Thai Digital Auspicious Consumption. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 144-187), Denver, CO, USA. ISTES Organization.

Introduction

If you walk along the street in Bangkok, which is the capital city of Thailand you will find lots of shops that sell a hundred kinds of lucky charms. Some look like small figures of Buddha, some are different. Even if you have the money only 50 cents, you can also buy it (Comaposada, 2022).

Walking through near the gasoline station, at the corner of the street. A thousand zebra statues both big and small sizes were set up in the shrine due to the belief of it will bring luck to the person that gives the zebra to the god of those shrines (Thangpan, 2017).



Figure 1: Zebra statues in front of the shrine in Thailand

Source: Tnews, 2020

Using your phone and opening the tinder application in Thailand during valentines' day, You will find the campaign "Tinder x Trimultri". Which is the collaboration between Tinder which is the online dating application and Trimultri shrine which is the famous spiritual love spot for singles in Thailand. Heading to Trimultri and praying for your love while in your hand holding the phone and opening Tinder, It claims that the opportunities to find love will enhance by the beliefs of god and the technology that makes everyone connected (Anirut, 2022).



Figure 2: Tinder x Trimultri campaign in Thailand

Source: Teroasia, 2022

Before getting dressed and stepping out of the house. Most Thai people would like to check their auspicious colored clothes daily using auspicious color chart that is recommended from fortune tellers on the internet. To build confidence and believe that they will be lucky if they wear the correct shirt according to the daily horoscope, for example, if born on Sunday, they will wear a red shirt for auspiciousness (Chanmakubduang, 2021).

There are superstitious beliefs everywhere in the world. But Thai people are more likely to engage in superstitious behavior than others. Thailand has been associated with faith for a long time, including temples, monasteries, and cultural attractions. That has been popular and famous all over the world. And another thing is the amulet that every household will have to worship and be a spiritual anchor. Moreover, an auspicious product business with a cash flow of up to 40,000 million baht per year (Siamrath online, 2022; ThaiPBS World, 2019).

Amulet, Auspicious object, Sacred place, including traditional beliefs which are about the Naga beliefs, amulet, Stories of famous monks or even a tattoo which is believed to help inspire or create hope for worshipers, both charming, kind, and popular. It attracts many tourists, especially many groups of people including Malaysian, Singaporean, Hong Kong, Taiwanese and Mainland Chinese to come to travel in Thailand (Duangkaew, 2022).

Currently in Thailand The strength of beliefs around auspicious consumption is increasingly growing. There is a new service that combines beliefs with the modern world; online horoscopes and astrology forecasts via a call center or have a auspicious product that has been developed in a variety of forms (Pooranima,2021). For example The Lucky wallpaper by Mootae World brand which is the digital auspicious product. It personalized designed by combining the customers' birthchart with the auspicious from Tarot card and other god and goddesses (The Knowledge,2022) Its's popular among young people and reaches 1 million baht income in less than 1 month of its opening. (Marketing Oops, 2021).

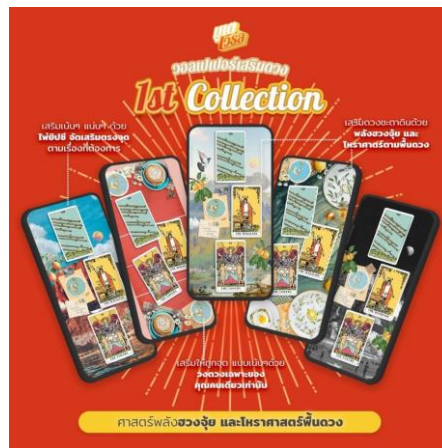


Figure 3: Mootae World's Lucky wallpaper

Source: Mootaeworld, 2022

According to the research “Marketing in the uncertain world” conducted by the College of Management Mahidol University in 2021, Digital Natives are the generation that has the most anxiety among all generations because of the Covid-19 pandemic, environment, society, politics, and technology. Moreover, the research also exposed that the method that Thai people use to cope with anxiety is auspicious consumption through social media, Surrounding people, expert suggestions, media, and television respectively.

Digital natives worldwide are suffering from the negative mental health such as depression, suicidal thoughts and self-harm because of epidemics, climate change, society, and technology like in Thailand. They tend to think that the world becoming a less desirable place to live (M. Twenge, 2019; Broadbent et al,2017).

Although Digital natives value their mental health, the important thing is they cannot afford mental-health service. So, They have to resolve this issue by consulting other young people on TikTok, and Reddit and following therapists on Instagram (Hakuhodo Institute of Life and Living ASEAN, 2021; Erica et al,2022). getting the online divination (Jiaviriyaboonya, 2020) wears lucky amulets, and has pictures of tarot cards as wallpaper on his phone (Patpicha, 2022).

Where digital natives perform auspicious consumption as a definition In other words, spiritual well-being is when a person has something as a spiritual anchor, which can be supernatural or religious. in order to overcome obstacles in life (Hendricks-Ferguson HV,2008 ; Gomez and Fisher,2003). Moreover, spirituality can support mental health positively (WebMD Editorial Contributors, 2021).

Since the digital auspicious product brands are increasing, The brand should focus on branding. Branding is essential since it not only creates a distinctive impression on consumers but also informs your customers and clients of what to expect from your business. It is a means of setting yourself distinct from the competition and defining what you offer that makes you the superior option (Dandu, 2015).

Because auspicious consumption is compiled of feelings as the motivation of the consumption and for the spiritual brand, It's so essential to hearthen the trust and have a personal approach to deal with a very personal subject. So, emotional branding is the key to communicating with a customer on a deeper personal level because spirit and emotion cannot separate from each other (Roberts-Lombard et al,2011). Moreover, Emotional branding is the tools and techniques for deeply emotional connections between products and consumers (Gobe, 2001).

Therefore, this research aims to establish the emotional branding strategy for a digital auspicious product derived from digital auspicious product motivation, digital consumption behavior and spiritual well-being of digital natives in Thailand who are the main target customer. In order for digital auspicious product brands to develop an emotional branding strategy that can reach consumers' motivation, including enhancing spiritual well-being to the point.

Research objectives	Research Questions
To identify the factors driving the trend of digital auspicious product consumption among the Thai digital natives in Thailand nowadays	1.What is the making of the trend of digital auspicious products in the perspective of auspicious consumption and digital consumption behavior in Thailand?

<p>2. To explore the spiritual well-being, digital consumption behavior, digital auspicious product consumption motivations, Emotional driven in consuming digital auspicious product of Thai digital natives.</p>	<p>2. What is the spiritual well-being of Thai digital natives? 3. What is the auspicious consumption motivation of Thai digital natives for digital auspicious products? 4. What is the digital natives' digital consumption behavior?</p>
<p>3. To clarify the current branding strategy of the digital auspicious products.</p>	<p>5. Did the digital auspicious product brand already adopt emotional branding?</p>
<p>4. To provide an emotional branding strategy derived from the digital natives' spiritual well-being, auspicious consumption motivation, digital consumption behavior and the current branding strategy of digital auspicious products.</p>	<p>6. How the digital auspicious product brand adopts an emotional branding strategy derived from the digital natives' spiritual well-being, auspicious consumption motivation, digital consumption behavior and the current branding strategy of digital auspicious products.</p>

Research Objectives and Questions

The table below demonstrated the research objectives and questions:

Table 1: Research Objectives and Questions

Source: Organized by the researcher, 2022

Literature Review

Thai Auspicious Product: From Traditional to Trendy

What is the Auspicious Consumption?

More than 80% of high-rise structures in North Carolina don't have a thirteenth floor. Because some building owners would rather not take a chance on a possibly unlucky floor, they eliminate it entirely from their designs (Savills Global, 2017).

People across cultures banging on wood, spit, and throw salt (Zhang et al, 2014), or possess the lucky charm (Wiseman and Watt, 2004) to undo bad luck.

Due to the belief that the number 8 is a lucky number in China, new residences on floors ending in "8" sell 6.9 days faster than on other floors. because the number sounds like the words "smooth" and "fortune" (Shum et al,

2014). Or Taiwanese consumers expect the red rice cooker that has a higher performance than the green one due to their belief that red is the lucky color. Moreover, they prefer to pay more for eight tennis balls compared to ten tennis balls because of the impact of the number 8 (Block et al, 2009). Even in the United States of America, lots of companies are applying feng shui in their offices by hiring feng shui experts (Tsang and Eric, 2004).

Thai people consider the number 9 to be lucky because it sounds close to the word "going forward," whereas Chinese people consider the number 8 to be lucky. As a result, the license auction's highest offer was placed on the license plate that ended in 9999. Moreover, A lot of Thai new business owners seek advice from a numerologist before opening a store or company (Thaipbworld,2019).

The irrational activities or consumption that are considered to magically bring favorable outcomes(safety, health, prosperity, wealth, status, and success) and prevent ominous outcomes(disastrous events) is called auspicious consumption (AC). "Auspicious consumption" term was created by Danqing Yu, In his doctoral degree dissertation: Why do I buy number 8? – A sequential mixed methods study on auspicious consumption in China in 2020. It exposed that auspicious consumption participation is not only influenced by belief in magic but also symbolic motivations, psychological motivations, and habits.

(Yu, 2020 p; 99) The motivation of auspicious consumption can be categorized as the information and figure 7 demonstrated below.

1. Belief in auspicious consumption: Belief in the magical or supernatural influences of AC that can result in positive results such as protection, blessing, good fortune, health, longevity, prosperity, success, and wealth. The believers in auspicious consumption can be divided into 3 types
 - Ambiguous believers are the people that not sure whether they believe in auspicious consumption or not but they didn't deny the possibilities or effects. They were influenced from the beliefs, norms or behaviors of other people's practices. Because they think that it's reliable.
 - Believers are the people that believe in auspicious magical effects
 - Nonbelievers are the people that do not believe in an auspicious magical effect.
2. Symbolic motivation: Refers to the social values of the auspicious products instead of functional values. It tends to be consumed in a public context.
 - Conspicuous motivation refers to the urge to display one's riches, status, tastes, or identity to others. For example, using the license plate 8888.
 - Conformity with the majority (Bandwagon) is the requirement to match normative actions. The term "conformity with the majority" or "bandwagon" refers to the desire to be in harmony with the majority of people, or to social pressure created by others.
 - Face-maintaining conformity(Propriety) is a desire to maintain "face" by consuming what

others believe one should consume based on their social status. They have to have the correctness of Auspicious consumption behaviors that match with their status or else they will loose the respect from others.

3. Psychological motivation: The desire to meet mental or emotional needs through auspicious consumption. Its focuses on personal or private influences.

- Affect is the emotional reactions from the result of Auspicious consumption. This motivation still difficult to distinguish about the root of motivation but the results show that the respondents said that auspicious consumption made them happy.
- Gaining positive feeling (Cheering up) is to use auspicious consumption consciously or subconsciously to be the strategy to make them feel positive and boost morale.
- Cope with uncertainty is to deal with the psychological stress that results from a losing sense of control from circumstances.
- Spiritual sustenance is the need to be spiritually sustained and supported.

4. Habit: This type of auspicious motivation is driven by habitual motivation like traditions, customs and habits. The decisions were not necessarily being processed in consumers't thinking.

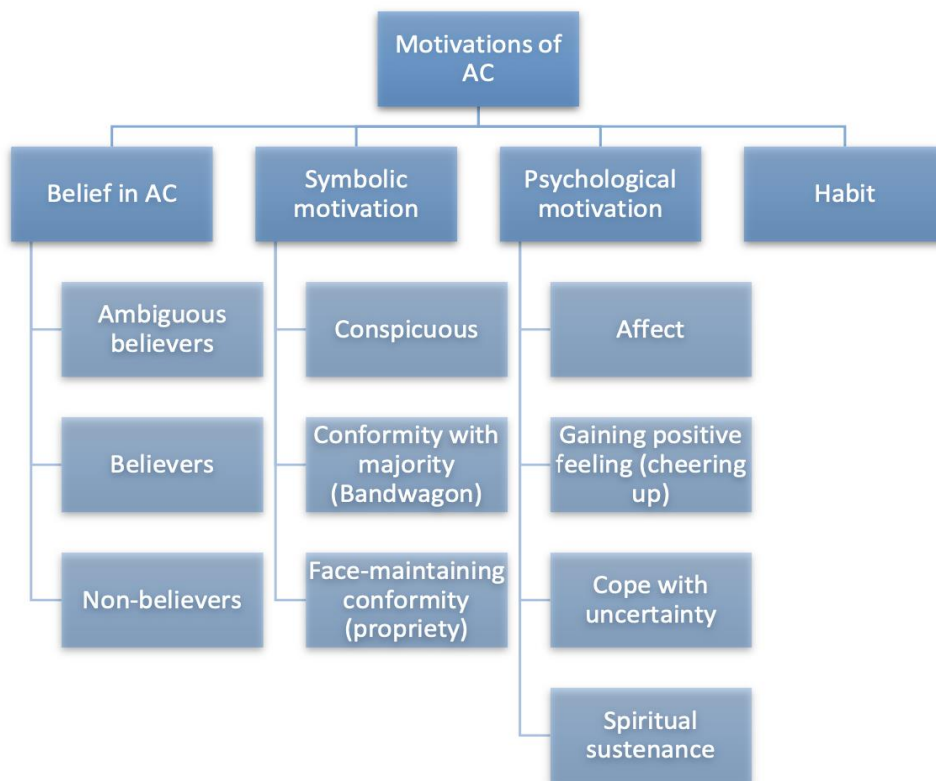


Figure 4: Auspicious consumption motivations framework

Source: Yu,2020

Thai Auspicious Product in a Nutshell

Thai Auspicious Product Concept

Imagine you are in a taxi in Bangkok, the heart of Thailand. Numerous small objects will be dangling from the rearview mirror, and there will be some bizarre talisman paintings on the ceiling (Comaposada, 2022). Or, when walking past the houses, you will see that many of them have miniature spirit houses that resemble dollhouses, where flowers and charms are provided daily to the spirits that reside on the property.

Thais have a strong belief in superstition. Before making significant decisions such as purchasing a home, getting married, or relocating, they frequently consult with fortunetellers. Numerous individuals preserve sacred amulets and consider fortunate numbers and colors seriously (Hays, 2019).

According to the auspicious definition, auspicious in Thai is “มงคล (mong-khol)” which means the things that bring auspiciousness and prosperity and prevent bad things (Thiramongkoljit, n.d.). Auspicious object term in Thailand was established after 1975. According to the research in journals and newspapers during that period. But if look back before 1975, It will use the word Amulet, Sacred, and small buddha image. Auspicious objects term can cover all of the small buddha images (Phra-Krueng) and also the amulet (Suthon cited in Tosomboon, 2020).



Figure 5: Thai small buddha images (Phra-Krueng)

Source: Kilen, 2018

(Ratchavaramuni cited in Wisalsaranat, 2021). Identified the definition of an auspicious object as an amulet, talisman, sacred object, the things that people believe without a rational, lucky coin, and the things that bring luck. In traditional Asian societies and Thailand, auspicious objects have existed for centuries. It can be seen in amulets from temples, shrines, and those distributed following beliefs (Parima, 2015).

From Traditional to Trendy

According to the rise of belief in amulets and sacred objects, people believe that they can be protected. In addition, the production of amulet products serves as a spiritual anchor. It stimulated demand and eventually evolved into a business (Pianrak et al, 2021). Moreover, this is commodification which means embodying the

beliefs, and rituals that are abstract into the object. After that Capitalism acts to select a certain set of cultures that are desirable for consumption or capable of stimulating consumption in the future and converting it into commodities by setting the exchange value by the supply and demand principle. Therefore, a new value of objects is called "goods and services" and the culture embedded through those goods or services is called "cultural capital" (Kummesrisuk, 2008).

Sujachaya,2013 identified the sacred objects as the cultural capital that it embodied 5 cultural elements including the belief that sacred objects are holy, faith in the creator of the objects, beliefs, and rituals involved in their creation, legends and stories about the objects, and rituals involved in the use of the objects.

During the ancient era of Thailand, Sacred objects discovered that are almost 2,000 years old are Small buddha images (Phra-Krueng), a small wooden image of a penis (Palad-Khik), a talisman, Takrud, an exorcist's knife, including gods of other religions such as Phra Brahma, Trimulti, and Rahu (Achirathanont,2022). The purpose of possessing among people and also the warrior is for Enhance auspiciousness, increase confidence, and prevent danger (Manaskittikul and Taiphapoon,2020).



Figure 6: The Small Wooden Image of a Penis (Palad-Khik)

Source: Thai Buddha image Admiration Association, 2021



Figure 7: Takrud from the Layla Brand

Source: Leila Amulets, 2019


Because in the past, society focused on masculinity, The popularity of amulets will focus on their invulnerability. But over time, the environment changes. Values in sacred objects are related to trade, popularity, and glory. After that, it changed again. The pattern of sacred objects looks cuter. It turns out to be in the form of a sacred stone that comes with sacred objects for women to use as well (Kongsuwan, 2021).

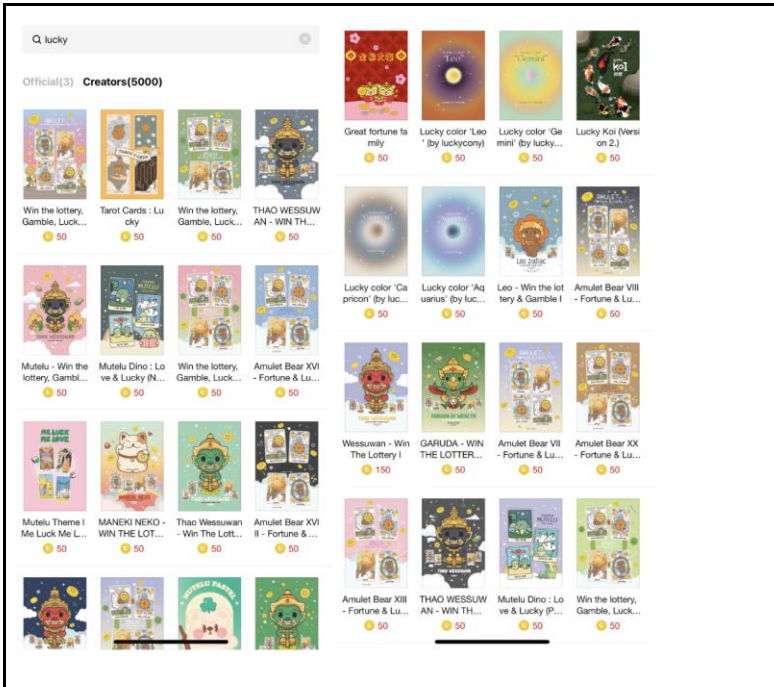
Furthermore, the businessman who noticed a marketing gap tried to combine the beliefs of the amulets with the state of the problem of mental instability in a person. Developing the amulet business and the products that are related to beliefs. by applying marketing trends, concepts, and fashion. Causing auspicious consumption, for example, are idols, lucky stones, and Takrud from the Leila brand. as well as the trading of auspicious phone numbers (Parima, 2015).

Thai Auspicious Product Nowadays

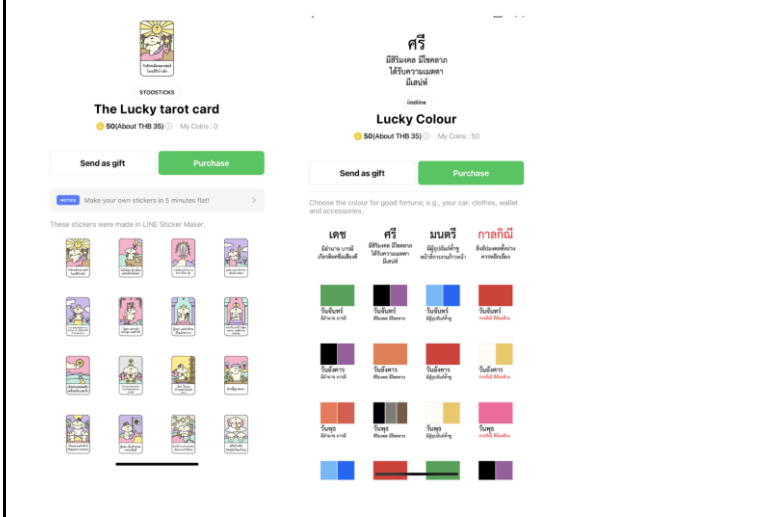
In the midst of the recent economic crisis and epidemic, many businesses were impacted and forced to adjust in order to survive. However, enterprises dealing with auspicious consumption, which is closely tied to beliefs, continued to expand. This business has adopted a modern design to accommodate the preferences of the youth today (The Knowledge, 2022).

Table 2: Auspicious product in Thailand Nowadays

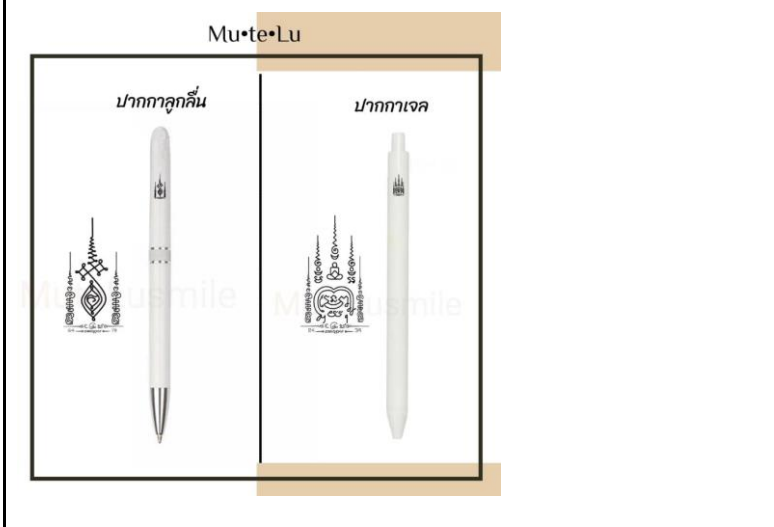
	<p>Digital lucky wallpaper)Brand : Mootae World(</p>
	<p>Geometrix talisman in open sea)Creator : Thai talisman(</p>



Lucky themes related in Line Thailand application



Lucky stickers related in Line application
)Creators : Stoosticks and iiodiine(



Lucky pen with Talisman
)Brand : Mu-te-lu(

	<p>Lucky sticky note with Talisman)Brand : Mu-te-lu(</p>
	<p>The god phone case)brand : Khun-mhuen(</p>
	<p>The astrology candle (Brand : Scene Matter)</p>

Source : Organized by researcher, 2022

Komkrit Uitekkeng, The lecturer at Department of Philosophy Faculty of Arts Silpakorn University gave his perspective in the online interview “Religion and modern Thai society” by Suphawan 2019 that most amulets nowadays are based on religion but not fully directed by it. The amulets that were produced by the temple are less likely to be labeled by religion. Also, the center of the lucky charms business is moving from a temple to a private business. Nowadays, no matter who you are, you can be a professional or a shaman. So, people who work in the amulet-making business have to learn to make different kinds of lucky charms so they can keep up with trends and fashion while still sticking to their core beliefs.

According to Achirathanont 's study "The Power of Belief and Faith in Sacred Objects to Jewelry and Gems" in 2019, marketing is becoming the link between producers and consumers in the auspicious lucky stone marketplace. The producers should design a logo and slogan for their products to make them easy to recall and

should learn more about the needs and beliefs of their customers.

A review of the literature on Thai auspicious products revealed studies on purchase intention and perception toward auspicious products (ORANNIVES et al,2017), (Rattanabhunchorn, 2018), (Kangwanvanish,2014) (such as amulets, auspicious stone bracelets, and the history of auspicious products, but no studies on digital auspicious products in Thailand. notably in terms of branding to differentiate brands.

Spiritual Well-Being and Digital Natives

Spiritual Well-Being Concept

Spirituality

Take a look at the term “spirituality” first, Spirituality is derived from the Latin word "spiritualitas" or the verb "spirare," which means to breathe; the spirit is synonymous with breathing. the necessity of breath for human survival. Only breathing can sustain human life (Golberg, 1998).

Golberg also mentioned that Spirituality assists individuals in achieving inner strength, happiness, life balance, and living life meaningfully Furthermore, spirituality is a source of importance. Hope or a mental anchor that enables one to overcome life's troubles, challenges, hardships, and difficulties and to adapt to illness.

It's also the motivation of living for the pursuit of meaning and the purpose of a person's existence. It inspires a person to pursue the greatest values in life (BN 1989; Rover and Kocum,2010; Stoll 1989) .

Moreover, spirituality has received much interest in health-care services, in which spiritual care has been considered inseparable from physical, social and psychological care because together they form the whole (Lo and Brown, 1999). it can improve strategies for managing stress and can positively influence immune, cardiovascular (heart and blood vessels), hormonal, and nervous systems (Chirico and F., 2016).

Spiritual Well-Being

The experience of pleasant feelings like happiness and contentment, as well as well functioning, having some control over one's life, having a sense of purpose, and having positive relationships, have all been identified as components of well-being (Huppert FA, 2009). According to a health professional, Bensley (1991) indicated wellness as a combination of the assorted aspects of human functioning, including social, mental, emotional, physical, and spiritual. Well-being can be defined into 8 dimensions (clark college, n.d.) including

- Emotional: having ability to Coping with stress, Expressing and accepting a wide scope of feelings in yourself and others
- Environmental: being encompassed by a healthy relationship
- Intellectual: widen the knowledge, skills and abilities through current personal growth

and be openminded.

- Physical: Eating good things, exercising frequently and avoiding harmful practice
- Social: being connect and living harmony with others
- Spiritual: Exploring the beliefs and values which give the meaning and purpose to the life. Having capacity to show compassion, learn to forgive others and seek fulfillment
- Occupational
- Financial

Spiritual functioning has equal relevance to physical, mental, and emotional functioning; one cannot treat an illness or disturbance within one component without understanding the balance and interaction between all of the components (Westgate, 1996).



Figure 8: 8 Dimensions of Well-Being

Source: Clark college,n.d.

Spiritual well-being refers to the state of being alive. As *recognition meaning of life which having goals,satisfied in life, having a spiritual anchor and connection with religion, supernatural, other persons and things that have prevail power*. Making the person to have goals, hope, spirited, inner strength, and directions in life and are ready to fight the obstacles that arise accept change and adapt to what is happening (Hendricks-Ferguson,2008; Gomez and Fisher, 2003).

In order to have the spiritual well-bing, The person have to receives the appropriate spiritual response (Somkamlang, 2013) which can brings the wisdom, see nature as it really is and being less selfish to have strong willpower to reach the goal (Vasi, 2007).

Spirituality can play an important role in defining psychological well-being (Božek et al, 2020). According to

Kor et al. (2019), longitudinal research among adolescents demonstrates that spirituality is stable over time and contributes to improved subjective well-being. It is also a fundamental character strength and a critical aspect in positive growth. Moreover, to the study about spiritual well-being and mental health during the covid-19 lockdown in Italy, (Ilaria et al,)2021) found that Religious and spiritual practices are a protective factor linked to physical, psychological, and mental health.

It can be concluded that in order to have good mental and physical health, spiritual well-being is one of the essential elements. It arises from the fact that a person has a spiritual anchor, spiritual practices, and having stable spirituality. Highfield and Carson, (1983) identified spiritual needs into 4 dimensions in both healthy way and problematic ways in their study “Spiritual needs of patients. Are they recognized?”.

Table 3: Spiritual needs in healthy ways and problematic ways

	Sign of spiritual health	Sign of spiritual problems
1. The need for meaning and purpose in life	<ul style="list-style-type: none"> ● Expresses that he has lived in accordance with his value system in the past ● Expresses desire to participate in religious rituals ● Lives in accordance with his value system at present ● Expresses contentment with his life ● Expresses hope in the future ● Express hope in the life after death 	<ul style="list-style-type: none"> ● Expresses that he has no reason to live ● Questions the meaning in suffering and death ● Expresses despair ● Exhibits emotional detachment from self and peers ● Jokes about life after death
2. The need to receive -love	<ul style="list-style-type: none"> ● Expresses confidence in the health care team ● Expresses feelings of being loved by others/god ● Expresses feelings of forgiveness by others/god ● Expresses desire to perform religious rituals leading to salvation 	<ul style="list-style-type: none"> ● Worries about how the rest of his family will manage after his death ● Expresses fear of dependence ● Does not discuss feelings about dying with significant others ● Does not call on others for

	<ul style="list-style-type: none"> • Trusts others/ god with the outcome of a situation in which he feels he has no control 	<p>help when he needs it</p> <ul style="list-style-type: none"> • Expresses feeling lack of supportive others
3. The need to give love	<ul style="list-style-type: none"> • Expresses love for others through actions • Seeks the good of others 	<ul style="list-style-type: none"> • Worries about the financial status of family during hospitalization/separation from others through death
4. The need for hope and creativity	<ul style="list-style-type: none"> • Talks about his condition realistically • Sets realistic personal health goals • Uses time during illness/hospitalization constructively • Values his inner self more than his physical self 	<ul style="list-style-type: none"> • Expresses of loss of control is unable to pursue creative outlets due to high level of physical disability • Exhibits overly dependent behaviors • Express anxiety about inability to pursue career, marriage and parenting because of illness

Source: Highfield and Carson, 1983.

There are the previous studies about the spiritual well-being that studied about spiritual care that impact the patients both globally and in Thailand (Oji et al(2017), (Klerlhee, 2019), (Nimu et al,2021), (Highfield and Carson,1983). Spiritual Well-Being and Spirituality at Work (Pensri et al,2016), spiritual well-being that impact mental health of digital natives in Thailand the other countries context(Illaria et al, 2021), (Nattaporn and Tippavan, 2017). But still lack of studies about the spiritual well-being of digital natives that are related to auspicious consumption in Thailand.

Digital Natives' Spiritual Well-Being Nowadays

“Spiritual and spiritual well-being It is of paramount importance to adolescents in both in normal and ill health condition. Because it will give you the spiritual anchor and the willpower”

)Klerlhee et al, 2020(.

According to the 2019 World Happiness Report (M.Twenge, 2019 ,2019), the predominance of negative mental health indicators such as depression, suicidal thoughts, and self-harm defines the mental health of digital

natives. The threat of a worldwide epidemic, climate change and the widening gap between rich and poor, The changing of technology, conflict, and war, and The emergence of radicalism and global terrorism are the causes of the pessimism among Digital natives about the future of the world and believe it is becoming a less desirable place to live (Broadbent et al, 2017).

“Compared to millennials, Gen Z is more anxious, they’re more stressed and they tend to be a bit more dark” said by MaryLeigh Bliss, Chief Content Officer of YPulse in “Gen Z, in Their Own Words: What They Really Want from Brands and Retailers” (Esposito, 2022).

In the Philippines, Reyes *et al*)2021(indicated that Filipino digital natives' climate change anxiety that associated with mental health increasing. In Japan as well, Japanese digital natives, are pessimists since they were grow up in a challenging environment, continued low economic growth, and numerous natural disasters (Sakashita,2020). Moreover, Thai digital natives are the generation that has the highest anxiety about the pandemic, society, economy, political, and technology among other generations (College of Management Mahidol University, 2021).

To conclude the studies above, The researchers have indicated that most of them are becoming pessimistic and less satisfied in life. Their spiritual well-being globally was impacted by the pandemic, and political, societal, and global change.

“Broadly speaking, younger generations seem to have more awareness about mental health than their older counterparts” Said Kelly Greenwood, CEO and founder of Mind Share Partners said in HEALTH AND WELLNESS Half of millennials and 75% of Gen-Zers have left jobs for mental health reasons (Cory, 2019).



Figure 9: Digital Natives' Opinions on Mental Health

Source : Hakuodo Institute of Life and Living ASEAN, 2021

Although Generation Z places equal value on their mental and physical wellbeing through placing on mental stability and inner serenity as a pillar of their ideal life and also think that life is about acquiring happiness (Hakuodo Institute of Life and Living ASEAN, 2021). They could not afford mental-health services. Financial hardship has been the largest obstacle to receiving mental health therapy. This lack of access to mental health treatments is troubling for a generation that is two to three times more likely than other generations to report seeking treatment for suicidal ideation or attempted suicide.

Numerous Digital Natives also mentioned that their initial step in resolving behavioral health issues was to consult other young people on TikTok or Reddit, follow therapists on Instagram, download related applications, get online divination (Jiaviriyaboonya, 2020) wears lucky amulets and has pictures of tarot cards as wallpaper on his phone (Patpicha, 2022).

Moreover, According to COVID to crypto-amulets: young Thais seek fortune-telling upgrades by Patpicha,2022. It indicated that Most of young Thai people are start to feel anxious and reach to the breaking point from the uncertain things that happened from the pandemic. So, they tried to grab something to be their spiritual anchor.

Emotional Branding in the Digital Era

Concept of Emotional Branding

In a world full of marketing messages from other brands and services The bare essentials of customers have been met, It's so difficult for the brand that has to make itself highlighted from others. So, The customer desires take on greater importance . They desire more than just the highest quality goods at the lowest feasible price to meet their needs. They seek intangible qualities like trust, respect, and love. They seek out items that have significance beyond themselves, products that are the basis of emotions, experiences, and connections. To meet this demand, the company should use emotional branding to engage people by appealing to their wants, goals. Emotional branding helps businesses perform on a different level than emotional bonds that enrich the lives of consumers (Akgün, Koçoğlu and Imamoglu, 2013 ; Consoli 2010; Acharya, 2018).

Gobe (2001), who is attributed with popularizing the idea of emotional branding, outlined its fundamental components that Emotional branding offers the tools and techniques for deeply emotional connections between products and consumers. Concentrating on the most compelling component of the human character: a desire to transcend material pleasure and attain emotional fulfillment. A brand is in a unique position to accomplish this because it can tap into the aspirational drives underlying human desire.

It can enhance the strong and durable emotional relationships between customers and businesses by using a customer-centric, relational, and story-driven strategy, passions, life stories, memories, and experiences that are more deeply integrated with the consumer's life (Roberts and K.2004; Akgün, Koçoğlu and Imamoglu, 2013).

Moreover, The study from Motista which is a pioneer in the development of Predictive Emotional Intelligence solutions indicated that customers who have an emotional relationship with a brand have a 306% higher lifetime value and will likely recommend the company at a rate of 71%. So, brand should build the emotional connection with their customer to make them feel committed. Ultimately, customers will reward brand with their loyalty because they are already emotional attached)Folajomiballo, 2022(.

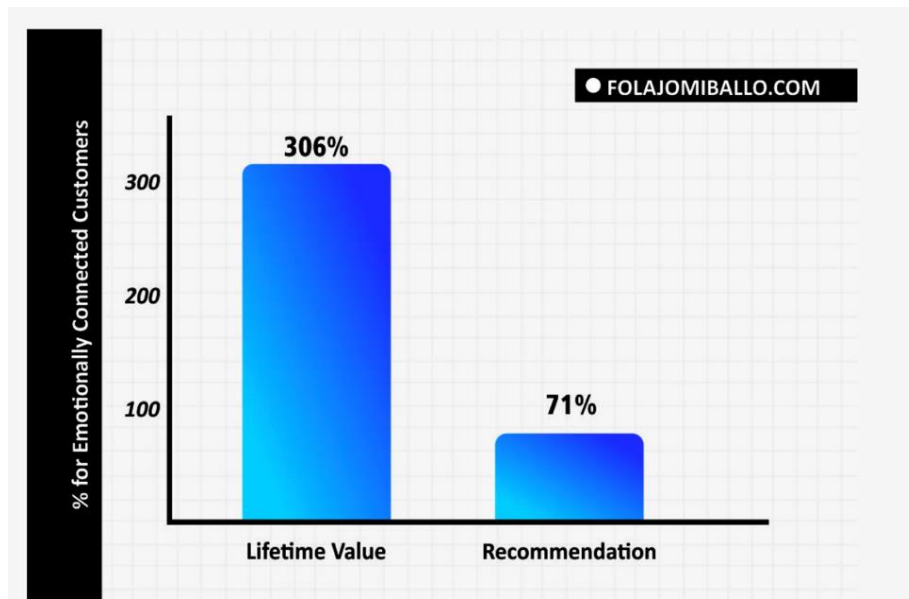


Figure 10: Percentage for emotionally connected customers

Source: Folajomiballo, 2022

Emotional Branding Strategy

Emotional branding needs a plan of action. To generate emotion in your audience, you must have a solid understanding of your buyer personas. Who currently adores your brand, how to classify them, What their target audience is, and what the emotion or sensation that you desire to evoke? (Digital Marketing Institute, 2018).

Building the strategy should revolve around the customer's emotional fulfillment, lasting emotional attachments, and integrated approach. As a result, marketers or brands will reap long-term benefits. (Morrison and Frederick, 2007) It should appeal to customers' emotions in order to increase consumer loyalty to the brand (Kim et al, 2019) Emotional branding should happen in every stage of the customer journey and should relate to all aspect of the business (GDS author, 2022).

Before you start implementing your approach, it's critical to comprehend the six stages of emotional branding ; Capturing attention and considering the emotion that customers will response, Encouraging purchasing by understanding the emotions of your audience and what drives their decisions, Developing a relationship, Developing customer loyalty, Making your brand part of your customers life and Benefiting from word-of-mouth (GDS author, 2022).

Kim and Sullivan also illustrated the model of how an emotional branding strategy makes customers engage with fashion brands. Consumers want to have positive experiences, express their true selves rather than idealized selves, radiate warmth, and take part in co-creation are all addressed by emotional branding. Through sensory branding, storytelling, cause branding, and empowerment, retailers have found success in focusing their

strategies on fulfilling these consumer desires. By its very essence, fashion is an emotional good that satisfies customer needs and desires. Therefore, it is essential for fashion firms to use emotional branding strategies to speak directly to their target customers' hearts.

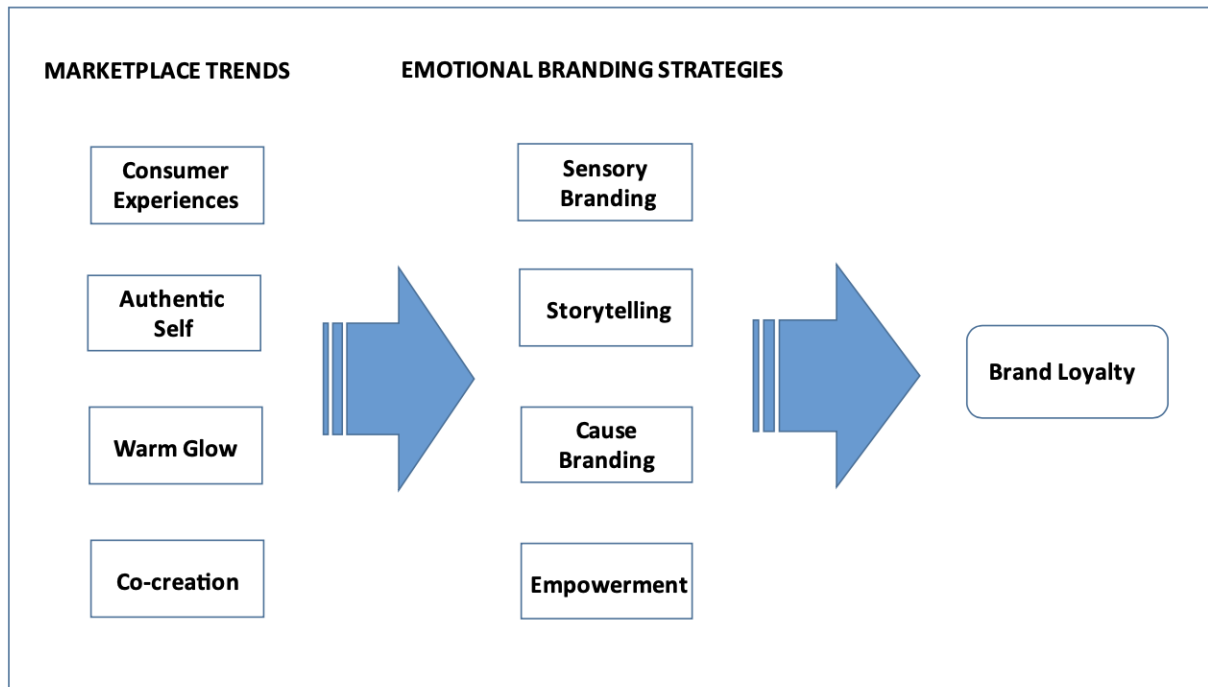


Figure 11: Emotional branding strategy

Source: Kim et al,2019

Another study by Roberts-Lombard et al (2011) shows how emotional branding and online design are applied on the spiritual travel agents. If taking a look at the online spiritual travel agent, It's essential to hearten the trust and have a personal approach to deal with a very personal subject because it's the spiritual brand. So, emotional branding is the key to communicating with a customer on a deeper personal level because the spirit and emotion cannot separate from each other. Using emotional approach and sensory elements, creating spiritual experience and building memorable customer experiences. They also found that, to arouse trust and interest should apply storytelling and visual as well.

Emotional Branding in the Digital Era

Due to the rapid evolution of technology and the business environment in the present day, businesses must determine their branding strategy properly. Most of the companies around the world nowadays adopt the digital as one of their branding strategy. However, digital branding has many other aspects, one of which is the emotional approach to branding, which is utilized by many of the world's largest corporations (Stoeva,2017).

The emotional branding analysis from Ionos,2020 shows how big companies in the world applied the emotional

branding by using social media. For instance, Coca-Cola's Share a coke campaign increased customer engagement. Personalized bottle labels used common names from several countries instead of the Coca-Cola logo. Coca-Cola urged customers to share photos of themselves with their own customized coke bottles on social media. This increased the brand's exposure on social media and its overall revenue.



Figure 12: Coca-Cola Share a coke campaign

Source: Coca Cola United, 2015

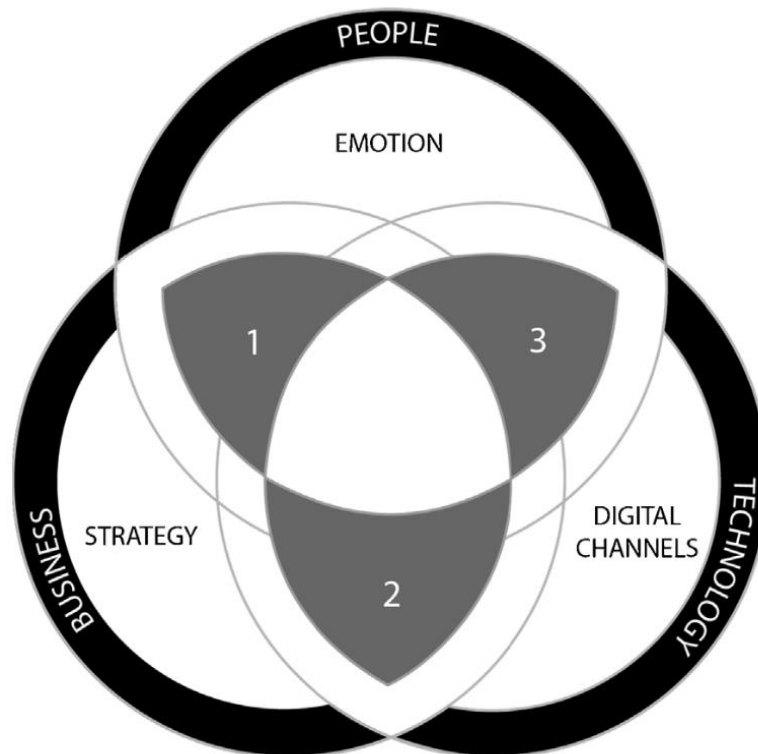


Figure 13: The intersection of emotion, strategy, and digital channels

Source: Karla and Cala,2016

According to the “Designing an emotional strategy: Strengthening digital channel engagements” by Karla and Cala,2016. They examined the digital channel relationships and provided effective concepts for defining the emotional meaning behind company strategy and their relationship to corresponding digital channels. Moreover, focusing on delivering online experience that customers want from companies.

To design an emotional strategy, the company has to understand the feelings, emotions, and moods caused by previous experiences with the company’s branding, advertising, or social interactions. Because the customer’s mindset is a main driver of the company’s performance. If a customer is immersed in the experience and brand over time, it could have a big effect on how they see the value of the business (Verhoef et al, 2009).

The process of producing an emotional experience is intricate and involves numerous variables. The design of digital channels must stimulate positive responses, satisfaction, and joyful experiences throughout time, therefore informing the generated experience. Customer demands determine the type of interaction desired by the customer, emphasizing certain feelings, emotions, and moods created by interactions with the business. The company should then select the appropriate digital touchpoint to communicate company value while also meeting customer needs (Karla and Cala,2016).

Digital Natives: Who They are and Their Digital Consumption Behavior

Who are They? What is Their Digital Consumption Behavior?

“ You see them everywhere. The teenage girl with the ipad, sitting across from you on the subway, frenetically typing messages into her cell phone. The whiz kid summer intern in your office who knows what to do when you e-mail client crashes. The eight-year-old who can brat you at any video game on the market-and types faster than you do, too. All of them are digital natives” (Palfry, 2011).

The term digital natives was introduced by Prensky in 2001. Other names of them that can be found on other research are App Generation (Gardner and Davis, 2013), GenZ (Bhalla, Tiwari & Chowdhary, 2021), and so forth. Digital natives are those who were born in the digital era and are native in the digital language of computers, video games, and the internet (Prensky,2001). They are defined as people who were born after 1980 (Palfry, 2011).

Internet, smart mobile phones, and mobile devices are utilized more effectively by digital natives than by the previous generation. They routinely use technical products and have no difficulty using complex ones (Rainie, 2006). According to studies, Gen Z is exposed to some type of social media every 60 seconds, more than any other activity (Baldonado, 2018) "92% say they go online every day." A quarter of people claim they use the internet 'nearly continuously.' "91% sleep with their device." (White, 2017).

Besides, The distinguishing characteristic of digital natives is their ability to multitask (Prensky, 2001). An

example scenario for the multitasking of digital natives is they can send short message services(SMS) while checking their email and doing their homework or adding the update for their social media account in the same time (Ng, 2012).

Digital Natives and What They Want from the Brand

According to Gen Z, in *Their Own Words: What They Really Want from Brands and Retailers* by Esposito,2022. The author mentioned that Gen Z or Digital Natives is the generation that focus and priority their mental health as a major pillar of their wellness and self-care. So, for the brands its clearly the opportunity. 71% of Digital Natives consumers prefer when brands use mental health as a part of brand's marketing and messaging Ultimately, In addition to contributing to organizations and causes that resonate with consumers, brands may take advantage of this newly discovered openness.

Brands can address the stress and anxiety of young people in the proper way by make a valuable contribution the society through launching a wellbeing product or service or weaving wellbeing authentically into the brand (O'brien, 2020).

O'brien,2020 also mentioned that digital natives are respond to emotional narratives. They use social media as a two-way communications. Brand should provide the fresh and new experiences to let the Gen Z participate to help them generate the social connections both online and face to face.

Digital natives consumers also use the social platforms as an escape from the real world and toxic news cycle. So, It's important for the brands to exercise emotional literacy and foster emotional relationships to manage the long-term loyalty between brands and customers. For example, connecting with Gen Z on the intentional social media platform that can allow brands to make the real connections with their communities (Pro,2022).

Thai Digital Natives

In 2013, Mindshare Thailand, a network marketing and communications agency conducts "Growing Up as Digital Natives" research to explore the use of the Internet and its digital impact. It was found that Digital Natives aged 14-24 are the largest proportion (8,500,000 people) It can be separated the Digital Natives into 2 groups.

1. Digitally born (Aged 14-17)

Started using the internet at the age of 9 according to the environment such as school, family, and friends. Since they were still a student, they did have not much money to spend on anything. They use chat lines and other social networks to update and follow their status as well as use the Internet for entertainment such as watching TV shows online or playing online games and watching youtube.

2. Evolving Digizen (Aged 18-24)

Half of this group uses the Internet all the time via smartphones and tablets. Daily life begins with using the Internet to search for information. And use social networks to communicate in their groups and make new friends via Facebook. Including photo sharing and real-time location check-in. And tried to keep an eye on the lifestyles of celebrities through Instagram. Then bring it to adapt to their own personality and style.

Moreover, 84% of these consumers believe that the Internet is a reliable source of information, and 19% start shopping online. They are searching for information online about the products they are interested in purchasing. Therefore, in the future, this group of people should be an important target group who are interested in e-commerce.



Figure 14 Thai Digital Natives' Top Online Activities

Source: Mindshare Thailand, 2013

Consequently, the concept of online living has become an essential component of digital natives worldwide, including Thais. In the internet age, people must always be connected. Besides, studying and working boosts competitiveness that need speed and expect people to be in constant online connection, such as creating a Line group for connecting with friends, studying, working, or talking with family. Moreover, They have to know the trends and news to update others. Therefore, Thai digital natives believe that being online all the time is the norm nowadays (ThianThai et al, 2020).

(ThianThai et al, 2020) also identified the Global digital natives' identities that also represent in Thai digital natives. They often do things quickly compete with time. This leads to an accelerated learning style, such as consuming media with images and viewing information from infographics. skimming reading and viewing information briefly and preferably using images, abbreviations, or symbols to communicate feelings. Send a sticker emoji or meme or animated gif, which is considered a quick communication.

Research Method

As shown in Figure 20, two phases are divided. The First phase intent to identify the factors behind the digital auspicious product consumption. The researcher applied literature review to obtain more understanding about the trend and how digital consumption behavior involved.

The second phase including the objective 2,3 and 4. Objective 2 which aims to explore the spiritual well-being, digital consumption behavior and digital auspicious product motivation of Thai digital natives under the case study by conducting the likert scale online questionnaire as the background information and then conduct the semi-structured interview.

The objective 3 which aims to clarify the current branding strategy of the digital auspicious product through a case-study approach. Doing semi-structure in-dept interview with the founder of the case study about their opinions on the digital auspicious product brand that wheter it already adopt emotional branding or not.

The final objective which aims to establish an emotional branding strategy for the digital auspicious product derived from the digital natives' spiritual well-being, digital consumption behavior and auspicious consumption motivation and the current branding strategy of digital auspicious products.

By the way, this research is in the on-going process. So, In this proceeding showed only the findings from the phase 1 which is the findings of research objective one: To identify the factors driving the trend of digital auspicious product consumption among the Thai digital natives in Thailand nowadays.

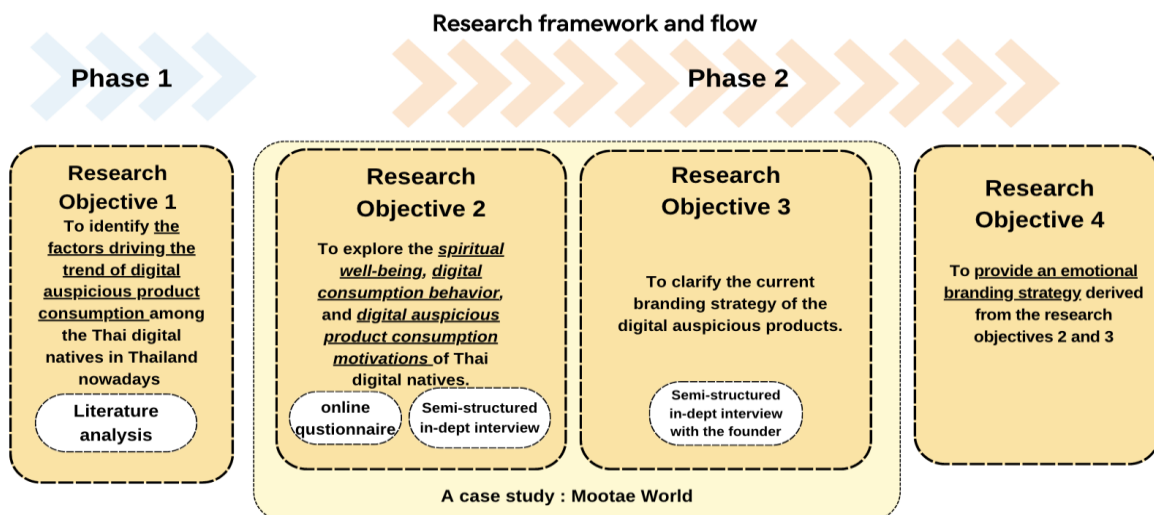


Figure 15: Research Framework and Flow

Source: Collated by the researcher

Results

In this section will show about the finding of research objective one which is to identify the factors driving the trend of digital auspicious product consumption among the Thai digital natives in Thailand nowadays.

Ingrained Auspicious Beliefs in Thai Society

Popular Buddhism

The mental foundation of the Thai people Being Buddhist, Buddhism and Thai's people have maintained a long-standing bond from the past to the present. According to history, It has now been 2560 years. Buddhism is the foundation of Thai culture and has been conveyed in the form of beliefs, rituals, arts, morals, laws, literature, language, customs, traditions, and the character of Thai people (Searmmai, 2016).

However, the superstitious belief system and the Brahmin belief system had already had an impact on Thai society before the introduction of Buddhism. Superstition in Thailand results from attempts to explain natural occurrences that cannot be explained scientifically, such as thunder and lightning, as the result of supernatural forces or the practice of magic by a wizard or shaman (Amara, 1976). Moreover, there is evidence of the prevalence of Brahmin rituals in Thai society and the Thai royal court, including the Loi Krathong celebration. This is an apology to the river and the Royal Ploughing Ceremony, which has its origins in Brahmanism (Siamganesh, 2023).

Hence, the definition of Thai Buddhism could state, "Set yourself as a Buddhist, Believe like a Brahman, yet behave as a ghost." Explains that if you violate the customs, you and your family will suffer the consequences which is a reference to the concept of ghosts. Buddhism has provided the concept of managing mental pain. And also worship Brahmin god and supernatural (Ittichaipol, 2021).

The other hidden beliefs and superstitions in Buddhism can also be called Popular Buddhism. It is distinct from traditional Buddhism, which conforms to the notion of nirvana because it emphasizes the pursuit of a life filled with happiness, dignity, wealth, and security. Moreover, It's the combination of traditional belief and the usage of superstitious magic to solve people's problems and use auspicious products to satisfy their needs (Yodkaew, 2012). In this session can be concluded that, on the basis of ghosts, Brahma and beliefs that have been influenced by the popular Buddhist religion are therefore one of the causes of belief in auspicious consumption and supernatural things in Thai society.

Thai Monk Scandal: The Fuel of the Declining of Buddhism

Although Buddhism has existed in Thailand for about 800 years, it has a close bond with the majority of Thais. It's a source of mental attachment and a way of life for people in society. But Buddhism has evolved since

monks, abbots, and even laypeople reported Buddhist scandals (TheHippoThai, 2018). The news or stories that occurred in the past media about monks in the Thai Sangha, both in terms of discipline violations. Impose civil law for violating the basic principles of the villagers and engaging in activities that go beyond the monks' duties (Polmuk, 2017).

In 2015, Maejo University exposed the poll under the topic “Buddhism in Thai society today” which indicated the factor that destroys the faith in Buddhism in Thailand the most is Monks' inappropriate behavior up to 60.36 percent (Bangkokbiznews, 2015).

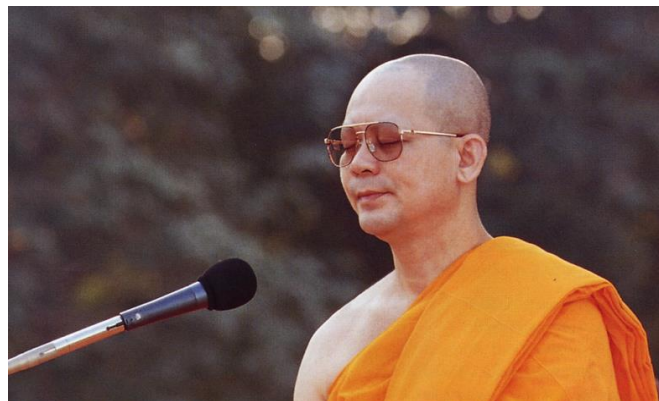


Figure 16: Buddhist Monk Dhammajayo

Source: Joshua, 2017

One of the greatest scandal news which caused a great impact in the Thai Sangha “Buddhist monk Dhammajayo” case in 2015. Dhammajayo was the abbot of Dhammakaya Temple which is one of the great empires in Thai Buddhism but at the same time is considered as a dubbed a sect of Buddhism or even a cult by Thai and international press. He is accused of financial fraud and invasion of Thai territory. After a month of searching for him in the temple by the military, the result is he still missing. Ultimately until 2021, many years passed. He hasn't been located yet (Jayintoh 2017; Mgr Online, 2021).

According to the case of Dhammakaya Temple. Bansomdej opinion poll exposed that in 2016 Thai people agree that the case of Dhammakaya Temple has resulted in people becoming less interested in Buddhism representing 46.6 percent (ThaiCh8, 2016).

Moreover, As reported about the Thai monk scandal in 2022 by Thairah Online which is the online news website evolving from the leading newspaper in Thailand, There are 4 news which dispatches the inappropriate monk behaviors which are a Shocking video of a renowned monk engaging in sexual activity with a lady was leaked, The disappear of a gay monk who has sexual intercourse with the novice monk, A monk who bought the sexual service from novice monks in temple bathroom and The violent behavior of the Abbot against the monks in the temple.



Figure 17: A monk who bought the sexual service from novice monks in temple bathroom news

Source: Thairath online, 2022

The majority of people, 55.84 percent, stated that monks never isolate themselves from the secular world when asked about the causes or circumstances that cause problems in Buddhism at the current time. followed by 49.76 percent of respondents who indicated that monks did not adhere to the ideals of monastic discipline, resulting in scandals regularly, such as monks using drugs, drinking alcohol, speaking impolitely, and engaging in sexual behavior. Moreover, 40 percent of respondents indicated that the operation to maintain the dharma and disciplinary standards controlled by the Sangha was ineffective (NidaPoll, 2017).

In this section can be conclude that, The Thai people's faith in Buddhism, which has long been a part of Thai culture, has deteriorated as a result of reports of the monks' improper conduct, and the persistent problem in Thai society has not been resolved.

The Beliefs of Thai Digital Natives

“When approaching the younger Thai generation, ask them what religion do you practice? I don't have a religion is probably a more common response” (The Attention and Chaiya, 2020). The younger generation in Thailand grew up during the monk scandals. Moreover, when they go to a temple, they usually face Buddhist consumerism, magic, and supernatural power performances, which contributes to the increasing nonbelief of the younger generation of Thais. includes beginning to doubt one's decision to follow their own faith rather than the religion of their family (Siririn, 2021).

As a result of the development and modernization of technology, numerous forms of mainstream religions and beliefs have been developed and adapted as alternatives for digital native Thais. Including the replacement of religious doctrines with online horoscopes in regard to their popularity. Make Thai digital natives believe in Buddhism or other religions, as well as accept other forms of belief or worship sacred objects from other

religions or superstitions (Jiaviriyaboonya, 2021).

Jiaviriyaboonya also mentioned that Thai Digital Natives admit this, even though they are educated. In fact, they still believe in superstitions, and also question the mainstream religion in society. They define themselves as “auspicious believers,” in Thai called “สายมู- Sai moo,” which means the person who believes in amulets and is superstitious.

Varasarn Press's 2020 investigation of Thai adolescents on the subject of Speak Up! : Multiple Views of Religion and Teens revealed, however, that there are still teenagers in Thai society who practice religions such as Christianity and Islam and Buddhists who said that they also believe in ghosts, keep amulets with themselves, and always pray for good fortune and to be safe before they go somewhere faraway. There are also those who don't believe in religion at all due to the fact that religion is an excess of life and does not meet the requirements of life.

Moreover, In Varasarn Press also exposed that The Buddhist sample indicated that although it is written as a Buddhist on the ID card, it is not actually a Buddhist. It is essential to show that they are Buddhist. Because parents are going to resist If they choose to become atheists. Some of them stated that when they are required to perform religious rituals at the temple on significant religious holidays, they value these activities as spending quality time with their families over value in religious purposes.



Figure 18: Thai digital natives during the interview about the topic Speak Up!: Multiple Views of Religion

Source: Varasarn Press, 2020

In this section, it can be concluded that Thai digital natives began to doubt the concept of religion as a result of multiple scandals and forced religious views passed down through families. Most of them prefer to have their decision on belief by themselves but some of them are not able to do that according to the family's limitations. Digital Natives who said that they are Buddhists also believe in ghosts, pray for a good life, are receptive to beliefs from different religions or sciences, believe in superstitions, and wear amulets.

Digital Consumption Behavior of Thai People towards Auspicious Consumption

Thai People Digital Consumption Behavior: Auspicious Content Consumption and Online Community

College of Management, Mahidol University 2021 indicates that up to 73.8% of Thais from Generation Baby Boomers, Generation x, Generation y, and Generation Z receive information about beliefs and auspicious content via social media.

Auspicious belief trends are continuously mentioned in the online community. This is evidenced by the fact that Thais searched keywords from 2022 to 2023 such as "auspicious believer," "make a wish for love," and "wish to win the lottery," etc. Youtube has had the maximum number of engagements over the past year up to 128,219,532 times, Tiktok and Instagram come in second and third place, respectively (Waritsa, 2023).



Figure 19: Social media engagement towards auspicious related keywords

Source: Warisa, 2023

Everyday marketing & Mandala the creative data engine in 2022 exposed the data from social listening since 1 January 2021 till 10 January 2022 about “What issue of the auspicious consumption which Thai people consume the most?”. They found that the most auspicious consumption issues which Thai people focus the most are financial (31%) and relationships (31%) following by career (18%), study (14%) and health (6%).

When we look through the digital natives digital consumption behavior. In 2021, the popularity of horoscope content increased by 30 percent, particularly among the younger generation, according to Line today, which serves as a center for news, information, and significant events, including more than 10 sub-categories (TV, Horoscope, Video, Sports, Health, Fashion-Beauty, IT-Tech) for Line application users. The content associated with auspicious consumption includes, for instance, online fortune-telling Chi-chi sticks from 80 renowned Thai temples, opening the cards to predict things, checking the lucky color of the day and live predictions from

famous fortune tellers, etc (Aripermporn, 2018; MathichonOnline 2022).

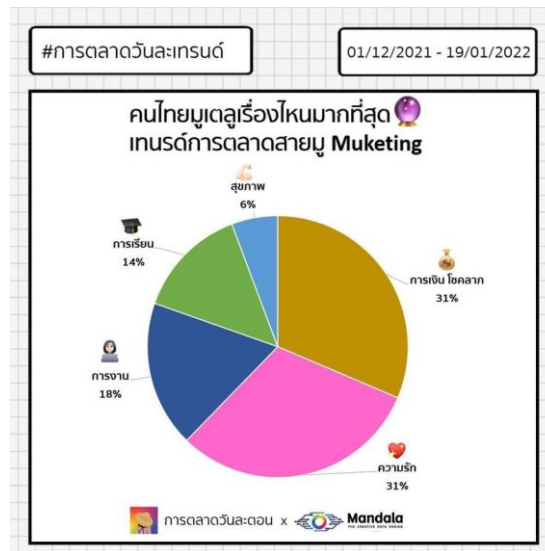


Figure 20: What issue of the auspicious consumption which Thai people consume the most?

Source: Everyday marketing & Mandala the creative data engine,2022

Moreover, the digital natives also accessed the online horoscope reading through various social media channels such as Google, IG (Instagram), Line, Twitter, as well as Facebook Pages, websites such as Sanook (www.sanook.com), “myhora” website (www.myhora.com), Line applications such as "Line Horoscope 8", Youtube channel. Additionally, from Facebook posts that were shared by others (Jiaviriyaboonya, 2021).

Thanawatchaikul,2022 exposed the reasons that affecting the consumer behavior to watch horosopes on online channel which consist of 1.Easy to access 2. Accessible at any time and from any location 3. Some problems cannot be consulted by close companions, so it is needless to reveal your identity to fortune tellers or outsiders. Additionally, They feared that their interest in horoscopes would make them appear foolish to outsiders.

Thanawatchaikul also mentioned that the true reason people continue to read online horoscopes is that they are receiving mental health treatment to boost their self-encouragement. After hearing the fortune-teller's predictions, the accuracy of the fortune-teller becomes apparent.

Grace Clapham, Head of APAC Community Partnerships and Programs in Asia Pacific at Facebook, pointed out that the spreading of the COVID-19 virus has increased the number of Facebook community group gatherings. Facebook groups that exist for the purpose of communication, to serve as a Facebook community for people with similar interests or passions, or as a means of connection. inform the community of the latest news (Chaiwang, 2020).

There are currently over 650 million Facebook group members and active participants in the Asia-Pacific

region. Thailand discovered As of March 2020, over 45 million Thai citizens are members of more than 6 million Facebook groups with active activity and connections. There are many different types of groups within Facebook groups, including those for medical personnel, crowdsourcing technology, online learning groups, market places, and a multitude of others (WP, 2020).

Even for the Facebook group community that discusses and shares everything about tarot cards, "Tarot & Beyond," shortly after opening this group, the number of members increased to almost a hundred thousand (Satitaxx, 2022).



ดูดวงไพ่ยิปซี | TAROT & BEYOND

Public · 140K members · 12 unread posts · Member since June 2021

ดูดวงฟรี จับใจมาถาม ช่วยกันอ่านไพ่ สอนวิธีการอ่านไพ่ยิปซี

Visit

Figure 21: Tarot & Beyond Facebook Group

Source: Tarot & Beyond Facebook Group, 2021

In this section, it can be concluded that Thai people access auspicious related contents through online channels. Especially digital natives, who access the contents via social media platforms such as Facebook, Line, Twitter, Instagram, etc. due to the fact that it's accessible anywhere, anytime, in private, free of charge, and is their mental treatment. Also because of the COVID situation, which increases the population of Facebook group communities to share their common interests through online platforms.

When it Triggered by New Normal: The Rising of Auspicious Consumption and Digital Transformation in Thai Auspicious Consumption Business

In the covid-19 situation, although contemporary medical science has effective treatments and explanations for the disease, it still causes more distress among Thai society's inhabitants. The numerous beliefs held by Thais have become an alternative method for fighting the epidemic. because they respond faster to mental needs (Kasempholkoon, 2020).

Sinit lertkrai, Deputy Minister of Commerce, also mentioned a situation in which the economy is unstable as a result of numerous unpredictable factors, such as emerging diseases, epidemics, environmental hazards, social inequality, education, differences in opinion, and other situations that influence daily life. Resulting in 2020 to 2023, the belief in auspicious consumption and the worship of various sacred objects to improve fortune and destiny will significantly increase in popularity. People who believe in auspicious consumption believe that worshipping and having faith in sacred objects, superstition, and talismans will help promote work, finances, good fortune, and love, which is a spiritual refuge and transmits positive energy for themselves (Datawarehouse of Department of Business Development, 2023).

The epidemic situation also requires Thais to modify their lifestyles, causing them not to leave the house, order food through delivery, purchase cautiously, work from home, and use online media to communicate with others. As for the business group, it shifted its focus to online marketing and the most efficient use of technology in order to generate income and keep providing care for its employees. Consequently, a new normal way of life and adjustments in the workplace, school, and business are established (Sangsawangwattana, Sirisaiyas and Bodeerat, 2020).

Because the popularity of various beliefs increased and the new normal became the starting point for a business in the area of auspicious consumption by applying technology and developing products and services to meet the requirements of the Thai people. For instance, “Sattha.online” was founded on the idea that belief has been an element of Thai culture for a long time. When confronted with a difficult circumstance, the majority of individuals seek a spiritual anchor in various aspects. 'Blessings and votives' is one of the options available during this pandemic that restricts transport. Therefore, faith online is prepared to serve as a connection between sacred objects and believers (Sattha.online, n.d.).

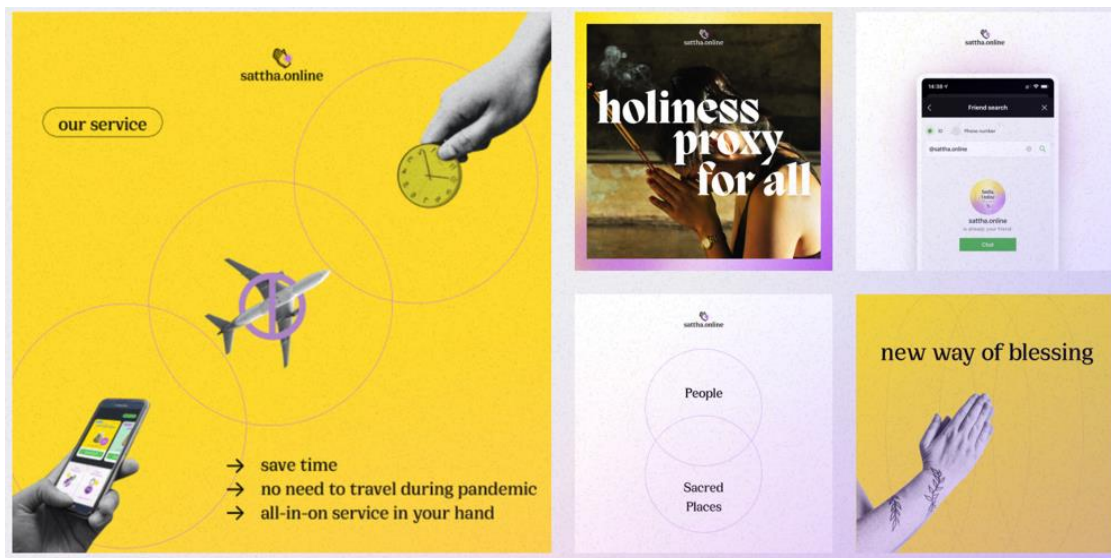


Figure 22: Sattha.online’s website

Source: Sattha.online, n.d.

Another case is “Songboon online” which was originally the morning food store for people who wanted to buy food to make merit to the monk and then use digital to transform their business to become the first online platform for making merit in the subscription packages. The founder said that because of the COVID situation, which limited people's lifestyles, he would like to develop the business to meet the needs of modern society. He also explained his vision through the COVID-19 epidemic, which has rendered the traditional method of conducting business ineffective. If the businesses do not reconsider, they will be unable to proceed. Consequently, owing to COVID, everyone must consider business development and continuously seek out new opportunities (Prachachat, 2021).

The results in this section indicate that various auspicious consumption businesses in Thailand have adapted digital platforms into their products and services according to the beliefs of Thai people, which increased by the covid-19 circumstance and also the new normal lifestyle which limited the way of life of people in multiple aspects.



Figure 23: Songboon online's products

Source: Prachachat, 2021

The Summary of the Findings

As the findings above indicated, the research objective one which is the factors driving the trend of digital auspicious product consumption among the Thai digital natives in Thailand nowadays, can be summarized into three factors according to the research question: What is the trend of digital auspicious products from the perspective of auspicious consumption and digital consumption behavior in Thailand?, including:

1. The foundation of beliefs about auspicious consumption in Thai society has been coupled with religious beliefs for a long time, including supernatural beliefs and carrying amulets. As time passed, the mindsets of Thai digital natives changed through the monk scandals, which made them doubt more about Buddhism and become more auspicious consumption believers.
2. The popularity of consuming auspicious-related content and joining online communities according to their interests, including auspicious-related topics, through the Facebook group community
3. Beginning of a digital transformation in auspicious business to meet the requirements of Thais during covid19 because several people require a spiritual anchor and the behavior of living more in the online world but leaving the house less.

The factors driving the trend of digital auspicious product consumption among the Thai digital natives in Thailand nowadays

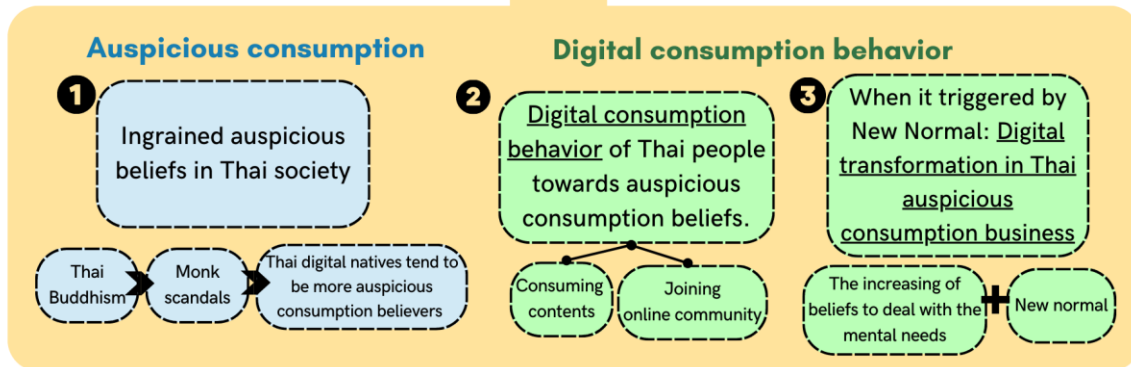


Figure 24: The illustrated of the Factors Driving the Trend of Digital Auspicious Product Consumption among the Thai Digital Natives in Thailand

Source: Collated by the researcher

This research is still in the on-going process, The process which in the phase 2 will be conduct through case study and mixed methods including online survey and semi-structured in-dept interview with the sample of Thai digital natives whose are the case study's customer and also conduct the in-dept interview with the co-founders of the case study in order to establish the emotional branding strategy for the digital auspicious product brand as the ultimate goal of this research as mentioned prior.

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Teacher Preparedness to Support Students with Adverse Childhood Experiences

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Abstract: It is estimated that up to 13% of children have been exposed to three or more adverse childhood experiences. The problem addressed by this study was the lack of adequate and appropriate teacher preparation in the support needed to combat the negative effects of adverse childhood experiences which can inadvertently intensify the academic, behavioral, emotional, social, and health challenges faced by children exposed to trauma. The purpose of this study was to explore teacher perceptions of pre-service and in-service professional development training provided to support the needs of elementary students that have been exposed to adverse childhood experiences in “at-risk”, rural communities. Implications of the finding include the need for teacher preparation programs to include training on adverse childhood experiences and strategies to support children exposed to trauma, for school districts to gather input from faculty on in-service topics that are relevant to needs within the classroom, for school districts to provide more in-depth hands-on and proactive training on strategies to support children exposed to adverse childhood experiences, and on self-care to combat compassion fatigue.

Keywords: Adverse childhood experiences, Trauma informed care, Compassion fatigue, Teacher preparedness, Professional development

Citation: Marshall, R. B. (2023). Teacher Preparedness to Support Students with Adverse Childhood Experiences. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 188-206), Denver, CO, USA. ISTES Organization.

Introduction

Adverse childhood experiences (ACEs) are plaguing today’s youth (Blitz et al., 2016; Rishel et al., 2019; Waehrer et al., 2020). It is estimated that one out of five children display signs of emotional distress resulting from exposure to ACEs (Ball et al., 2016). Blodgett and Lanigan (2018) reported that up to 13% of children have experienced three or more ACEs. Adverse Childhood Experiences (ACEs) are defined as traumatic or potentially traumatic events that can have a lifelong negative effect on the child (Blodgett & Lanigan, 2018, Felitti et al., 1998). Adverse childhood experiences can include community violence, domestic violence, abuse, neglect, and natural disasters (Blodgett & Lanigan, 2018; Elmore & Crouch, 2020; Sciaraffa et al., 2018). The long-term effects of ACEs in adults were the focus of an initial study conducted by Felitti and associates in

1998. Subsequent studies conducted with adults explored the long-term effects of ACEs and identified a direct relationship between exposure to ACEs and adult health and mental health concerns (Merrick et al., 2019; Miller et al., 2020; Waehrer et al., 2020). Findings from these research studies linked exposure to four or more ACEs to chronic health challenges such as heart disease, chronic obstructive pulmonary disease (COPD), cancer, chronic lung disease, and liver disease (Merrick et al., 2019; Miller et al., 2020; Waehrer et al., 2020). There was also a direct correlation between exposure to trauma and high-risk behaviors such as alcoholism, drug use, obesity, smoking, depression, suicide, mental health challenges, and multiple sexual partners. Additionally, exposure to ACEs is closely related to increased mortality rates (Waehrer et al., 2020). Given that medical and mental health challenges in adults are directly related to exposure to ACEs, justifies the need to support early identification (elementary) and intervention in order to positively affect the life trajectory of a child exposed to early trauma (Blodgett & Lanigan, 2018; Sciaraffa et al., 2018).

Increased exposure to ACEs leaves many children in a state of toxic stress (Blitz et al., 2016; Finkelhor, 2020; Zeng et al., 2019). Toxic stress is a physical reaction to extended exposure to traumatic events or chronic adversity. Levels of stress hormones are increased, placing the individual in a “fight or flight” mode (Blitz et al., 2016; Sciaraffa et al., 2018). When children are in a state of toxic stress from early exposure to trauma, it can cause chemical changes which influence and restructure brain development (Sciaraffa et al., 2018). Chemical changes and restructuring can lead to a variety of internalized behaviors, such as inattentiveness, depression, and anxiety as well as externalized behaviors, such as aggression and impulsivity (Berger, 2019; Sciaraffa et al., 2018).

Children who have been exposed to trauma and ACEs are more likely to display behavior and academic challenges (Sciaraffa et al., 2018). In the elementary classroom, the effects of trauma and exposure to ACEs can present as impaired language and communication skills, decreased social skills, lack of motivation, difficulty with cause-and-effect relationships, and a decreased ability to control emotions (Sciaraffa et al., 2018). Consequently, traditional methods of instruction and intervention that involve punitive consequences have been found to be ineffective (Sciaraffa et al., 2018). A study conducted by Gee (2020) reported that up to 25% of children that have been exposed to ACEs are placed in special education. Many children exposed to early trauma are placed into the foster care system which increases the likelihood of special education placement nearly three times when compared to children that remain with biological families (Gee, 2020).

Children spend the majority of their day in the school setting (Pataky et al., 2019; Rishel et al., 2019). The early identification and implementation of support during the school day can lead to needed resilience skills that can change future outcomes for trauma-exposed children (Pataky et al., 2019; Rishel et al., 2019). Universal screening has been found to be an effective method for early identification of children exposed to ACEs (Pataky et al., 2019; Rishel et al., 2019). In an effort to better understand the effects of early exposure to trauma, a preschool subset for post-traumatic stress disorder (PTSD) diagnostic criteria was added to the *Diagnostic and Statistical Manual of Mental Health Disorders* (DSM) 5th edition in 2013. Scheeringa et al., (2011) conducted a study over the course of several years using the addition of the preschool PTSD subset and noted an increase in

the identification of children exposed to trauma from 13% to 69% (Cummings et al., 2017; McGruder, 2019). Isolated studies using multi-tiered intervention within the school setting have been found to provide the academic, emotional, and social support needed for children exposed to ACEs (Frydman & Mayor, 2017; Rishel et al., 2019; Taylor & Barrett et al., 2018). Multi-tiered interventions in the form of social-emotional group and individual counseling can provide support to children that had been exposed to three or more ACEs (Pataky et al., 2019; Rishel et al., 2019). Pataky et al., (2019) noted that some students possess or develop resilience skills that may diminish the negative effects of early traumatic experiences. Although not directly measured, Pataky et al., 2019, found through exit interviews that students who were able to identify supports in their lives, demonstrated fewer negative effects of exposure to ACEs. The realization that early support can change outcomes is noteworthy (Pataky et al., 2019; Rishel et al., 2019). However, current literature lacks empirical studies that explore the direct connection between early intervention and the development of resilience skills.

Early identification and interventions are necessary to prevent future adult health issues that may reduce the quality of life as well as mortality rates (Rishel et al., 2019; Waehrer et al., 2020). Exposure to chronic trauma can affect all aspects of the child's growth and development (Pataky et al., 2019). For this reason, it is beneficial for classroom teachers to have the knowledge and skills that they need to support the learning of this vulnerable population in the classroom setting (Ball et al., 2016; Cooc, 2019; Cummings et al., 2017; Pataky et al., 2019; Winder, 2016; Yi-Hsuan et al., 2020; Zeng et al., 2019). A study conducted by Cummings and associates (2017) interviewed 14 community service providers regarding their work with children that had been exposed to ACEs. Seventy-nine percent of the participants reported that classroom teachers were unaware of the trauma experienced by the children and families in their community (Cummings et al., 2017). The identification of ACEs and interventions to support children exposed to ACEs is a relatively new area of study and therefore, research is limited.

General education and special education teachers are not prepared to identify the effects of ACEs and provide the support needed for students that have been exposed to trauma and adversity (Ball et al., 2016; Cooc, 2019; Cummings et al., 2017; McGruder, 2019). Cummings et al., (2017) identified the importance of teachers recognizing trauma exposure in the children and families they serve, having a positive attitude, and using effective collaboration skills and strategies to help students positively express emotions as key skills needed for teachers serving children. In multiple studies, K-12 teachers reported that they felt unprepared to meet the growing demands of students that have been exposed to traumatic events and ACEs (Cooc, 2019; Cummings et al., 2017; McGruder, 2019; Zeng et al., 2019). Klopfer and colleagues (2019) found that out of 117 pre-service teachers surveyed, 81% indicated that they did not receive adequate preservice training on managing the emotional and behavioral challenges of children. Teacher preparation programs provided limited instruction to teacher candidates on trauma-informed practices and strategies, such as mindfulness, that are needed to support students that have experienced early trauma (Ball et al., 2016). Additionally, teachers have a limited understanding of the effects of ACEs and often do not connect academic and behavioral challenges with trauma and ACEs (Cummings et al., 2017). Teacher preparation programs (i.e., pre-service training) focus on providing instruction on standards, curriculum, and pedagogy (Ball et al., 2016). Similarly, in-service training (i.e.,

professional development) for teachers supports learning and skill development in curriculum and academics (Ball et al., 2016). Many researchers contend that what is missing from this preparation is training on the mental health challenges associated with ACEs that trouble today's youth (Ball et al., 2016; Cummings et al., 2017).

Rural communities are often plagued with a multitude of social challenges which can lead to early childhood trauma. The Mid-Ohio Valley (MOV) was the rural geographic area targeted for this study. The MOV is plagued with a low socioeconomic status and a rate of opioid addiction that exceeds national averages (Rishel et al., 2019). The factors of low socioeconomic status and illicit drug use lead to many of the ACE indicators, such as broken homes, incarcerated parents, and food insecurity (Burke Harris, 2015; Radcliff et al., 2018; Rishel et al., 2019). Rishel et al., (2019) reported that as exposure to ACEs increases, so does the likelihood of drug use by the individuals exposed to traumatic events (2019). The Adverse Childhood Experiences Coalition of West Virginia partnered with Crittenton Services to explore the prevalence of ACEs in 28 independent organizations across the country. Findings indicated that the average number of individuals across the country that have had exposure to six or more ACEs was approximately 12%. The geographic target for this study, the MOV, reported 65% of participants had been exposed to six or more ACEs (Rishel et al., 2019).

Early identification coupled with training on trauma-informed practices can support students in the development of resilience skills that can combat the negative effects of ACEs (Ball et al., 2016). Without support, teacher training, early intervention (elementary), and research on ACEs, children that live in an environment plagued with trauma and adversity will not have the skills needed to change their future in a positive manner leading to a repeat of adversity for the next generation of children (Berger, 2019; Blodgett et al., 2018; Rishel et al., 2019; Spencer et al., 2018). Research is limited on effective strategies and supports needed by teachers to support elementary-aged students in rural communities that have been exposed to ACEs (Rishel et al., 2019).

The problem addressed by this study was the lack of adequate and appropriate teacher preparation in the supports needed to combat the negative effects of ACEs, which can inadvertently intensify the academic, behavioral, emotional, social, and health challenges faced by children exposed to trauma in rural communities of the MOV (Ball et al., 2016; Cooc, 2019; Cummings et al., 2017; McGruder, 2019; Rishel et al., 2019; Zeng et al., 2019). Ball et al., (2016) found a discrepancy among states regarding pre-service and in-service professional development training on mental health issues, that result from ACEs. Teacher preparation programs often lack explicit instruction for identifying and preparing teachers to meet the needs of students exposed to ACEs (Ball et al., 2016; Cooc, 2019; Cummings et al., 2017; Zeng et al., 2019). Ball and colleagues (2016) reviewed the professional development standards of 48 states and found that only 20% of states included training on early signs and symptoms of ACEs and mental health challenges.

Without knowledge of the early signs and symptoms of ACEs related challenges, traditional methods of intervention such as "time out" and "loss of privilege" can exacerbate internalized and externalized behaviors, leaving educators feeling unprepared to meet the unique social mental health needs of children exposed to ACEs

(Rishel et al., 2019). Teacher pre-service and in-service training do not mandate instruction on ACEs and the effect that exposure has on young children. Teachers that are not knowledgeable about ACEs can inadvertently add to or worsen the effects of trauma experienced by students that have been exposed to ACEs (Cummings et al., 2017; Rishel et al., 2019). There is a disconnect between teacher training and the need to support social-emotional health in young children that have experienced trauma (Ball et al., 2016; Cooc, 2019; Rishel et al., 2019).

The purpose of this qualitative descriptive study was to explore teacher perceptions of pre-service and in-service professional development training that is provided to support the needs of elementary students that have been exposed to ACEs in “at-risk,” rural communities in the MOV. Qualitative descriptive studies are data-driven and are used to collect data from participants in their natural environment in an effort to effect positive change in the study setting (Lambert & Lambert, 2012). The target population for this study was 640 certified elementary general and special education teachers in rural communities in the MOV. The purposive study sample consisted of 10 K-6 general and special education teachers that were working with students that were “at-risk” or eligible for special education services (Bloomberg & Volpe, 2019). Curriculum directors from three school systems in the MOV were asked to provide access to contact information for sample participants, due to their knowledge of their individual school systems, thus narrowing the pool of participants to only licensed elementary educators that met the eligibility criteria for the study (Bradshaw et al., 2017).

Years of experience were not an inclusion criterion in an effort to maximize the variation of the data sample. All participants were asked to complete an open-ended questionnaire exploring knowledge of ACEs, followed by a semi-structured interview exploring perceptions of in-service and pre-service training. An interview protocol was used to conduct the interviews which were recorded and transcribed verbatim. Data was collected to the point of saturation to ensure that no new data was appearing, and that the data was able to answer the research questions (Bradshaw et al., 2017; Doyle et al., 2020). Data was manually coded for codes and themes during the thematic analysis process (Bloomberg & Volpe, 2019; Bradshaw et al., 2017). Due to the absence of literature on ACE training, findings from this study may be used to guide professional development training, program planning, and instruction of pre-service teachers leading to the identification of mental health supports and services for children that have been exposed to trauma and ACEs, which could change life trajectory in a positive manner (Ball et al., 2016; Rishel et al., 2019).

Method

Research Design

This study used a qualitative method and a descriptive design. Qualitative research by definition is research that is designed to gain a deeper understanding of a social situation through the eyes of those directly involved (Bloomberg & Volpe, 2019). Characteristics of qualitative research include conducting the research in a natural setting and viewing the phenomenon being studied from the perspective of the participants.

The data collection methods utilized for this study were an open-ended, questionnaire followed by a semi-structured interview (Bloomberg & Volpe, 2019). Open-ended questionnaires were used to collect structured data from sample participants (Byrne, 2017a). Questions were focused on and specific to the information needed for the study (Byrne, 2017a). The open-ended questionnaire designed for this study was utilized to collect demographic data relative to the research questions from the sample as well as participants' initial thoughts and perceptions of ACEs.

Semi-structured interviews were conducted to collect more in-depth information from participants regarding their perceptions of pre-service and in-service training received on supporting the unique needs of elementary students that have been exposed to ACEs. The use of semi-structured interviews aligned well with the research questions identified for the study. Seeking to gain the perspective of teachers resulted in a collection of rich, thick data. The semi-structured interview provided the researcher the opportunity to collect valuable data as well as clarify any statements provided by participants by using follow-up questions, which led to more in-depth and descriptive data (Bloomberg & Volpe, 2019). The semi-structured interview process consisted of an interview protocol that contained open-ended questions along with follow-up prompts as needed. The interview protocol was used as a guide allowing the interview to be conducted more as a conversation rather than a formally structured interview (Byrne, 2017). The interviews were recorded and transcribed verbatim, noting any non-verbal communication, pauses, and/or hesitations (Bloomberg & Volpe, 2019; Bradshaw et al., 2017; Denham et al., 2013; Doyle et al., 2020; Lambert & Lambert, 2012).

Data Analysis

Data analysis began once interview transcription was complete. To ensure credibility and support the triangulation of data, member checking was utilized once the initial data collection process was completed. Koelsch (2013) defined member checking as the procedure utilized to provide participants with an opportunity to review preliminary conclusions of the data analysis process. The reflective process of member checking ensured that the researcher portrayed an accurate representation of the participants' experience (Koelsch, 2013). Thematic analysis was conducted to explore perceptions of preparedness with both general and special education stakeholders (Bloomberg & Volpe, 2019). cursory readings of the data generated initial codes that were analyzed for themes (Nowell et al., 2017). Manual coding was the primary means of analysis (Bloomberg & Volpe, 2019; Bradshaw et al., 2017). The initial analysis involved open coding to identify major points from the interviews (Bloomberg & Volpe, 2019). Inductive coding was used to determine similarities within the data. Further review produced additional codes and common themes (Bloomberg & Volpe, 2019). Additional readings led to axial codes which began to make connections and identify relationships between the data (Bloomberg & Volpe, 2019). Qualitative descriptive studies are inductive, thus leading to possible changes in codes based on the data analysis (Bloomberg & Volpe, 2019). The iterative nature of a qualitative descriptive design provided the flexibility needed to utilize follow-up interviews with sample participants and member checking to revisit codes and themes ensuring a factual representation of participants' experiences (Bloomberg

& Volpe, 2019). The findings provided answers to the research questions leading to a deeper understanding of the perceptions of professional development opportunities provided to elementary teachers and the perceptions of need when faced with providing support to children that have been exposed to trauma and ACEs.

Study Participants

The target population for this study was approximately 640 certified K-6 general and special education teachers in rural communities in the MOV. The study sample consisted of 10 K-6 general and special education teachers within the target population (Bloomberg & Volpe, 2019). Purposive sampling was utilized to identify sample participants based on the inclusion criteria. In contrast with random sampling, purposeful sampling can aid in the identification and selection of sample participants that have varied backgrounds and experiences (Bloomberg & Volpe, 2019). Inclusion criteria for participants were current general and special educators in the MOV working in the K-6 setting that was working directly with students identified by the school district as “at-risk” or in receipt of special education services. Students who are “at-risk” have a high probability of reduced success in the school setting due to academic, behavioral, emotional, social, or home factors (Rishel et al., 2019).

Participants for the study were identified through curriculum directors from three local school districts in the MOV (Bloomberg & Volpe, 2019). The curriculum directors were asked to contact general and special education teachers in grades K-6 in their respective districts that were currently working with students identified as “at-risk” or in receipt of special education services (Bloomberg & Volpe, 2019). A recruitment flyer was sent to all identified participants by the curriculum directors. Interested participants were asked to complete a letter of consent by opting in or opting out of the study prior to completing the open-ended questionnaire on the Qualtrics platform. The data collected from the open-ended questionnaire contained demographic information relative to the research questions along with participants’ initial thoughts and understanding of ACEs and training received which aligned with the study research questions; thus, providing the groundwork for the data to be collected in the semi-structured interview process. Additionally, willingness to participate in the semi-structured interview portion of the study was identified.

Procedures

The instrumentation utilized for the study included a newly developed initial questionnaire as well as an open-ended, semi-structured interview protocol (Bloomberg & Volpe, 2019). An initial open-ended questionnaire was utilized to collect demographic information related to the research questions on all of the participants identified in the sample as well as preliminary thoughts on ACEs.

The open-ended questionnaire was designed to collect preliminary information from sample participants. Results of the initial questionnaire guided the next stage of the data collection process by providing data that answered the research questions and identified any changes that were needed to enhance the interview protocol leading to richer more descriptive data (Bloomberg & Volpe, 2019).

For the purpose of this study, the questionnaire and semi-structured interview questions were field-tested. The field test experts were asked to provide feedback on the validity of the questions and offer suggestions for changes or additions to the protocol. After feedback was collected, the questionnaire and interview protocol, and questions were adjusted to reflect stakeholder input (Jacob & Furgerson, 2012; Roberts, 2020).

Prior to initiating the data collection process, the study obtained approval from the Institutional Review Board (IRB). All materials to be used, including the recruitment flyer, open-ended questionnaire, and the semi-structured interview protocol were submitted for approval. Since the study was conducted with human subjects, a consent form was also created and submitted for approval.

The study was conducted in three different school districts in the MOV. Once approval was obtained from the IRB, the data collection process began. The recruitment flier was provided to the curriculum directors for the three districts in the geographic target area in the MOV. Curriculum directors were asked to identify potential sample participants from their respective districts by sending K-6 teachers the recruitment flier. A link was provided on the recruitment flier that guided interested participants to the open-ended questionnaire on the Qualtrics online platform.

The consent letter was included in the Qualtrics link, and the questionnaire would not open until the sample participants indicate that they meet the criteria for the study and provide consent. Participants that indicated a willingness to participate in the full study were contacted through the preferred method, phone, text, or email, to participate in the semi-structured interview stage of the data collection process.

Results

The initial phase of this research began with the distribution of the recruitment flier. Three curriculum directors from three local school districts in the Mid-Ohio Valley (MOV) served as the “gatekeepers” for e-mail access to K-6 faculty in their respective districts. Curriculum directors were provided the recruitment flier with the Qualtrics questionnaire link that they distributed to K-6 general and special education teachers in their counties/districts. The Qualtrics open-ended questionnaire was completed by ten participants over the course of two weeks. Although the return rate was low, the sample was varied and included a wide range of participants. The participant sample consisted of ten K-6 general and special educators that represent a range of participants that serve students from 1st grade to 6th grade, that have two years’ experience to 35 years of experience, are self-contained teachers as well as departmentalized teachers. Participants were primarily female although one male was included in the sample. Levels of education ranged between bachelor’s degrees and doctoral level participants with the highest concentration at MA plus 45 hours of continuing education. Sample participants indicated limited to some knowledge of ACEs and none to some professional development training to support the needs of children exposed to ACEs. Sample demographics are shown in more detail in Table 1 below.

Table 1. Demographics of Study Participants

	<i>n</i>	%
Gender		
Female	9	90
Male	1	10
Highest Education Level		
EdD	1	10
EDs	1	10
MA + 45	3	30
MA + 15	1	10
MA	2	20
BA	2	20
Years' Experience		
30+	2	20
21-29	2	20
11-20	3	30
1-10	3	30
Assignment		
Interventionist K-6	3	30
General Education	4	40
1st grade	1	
2nd grade	1	
3rd grade	1	
5th/6th grade	1	
Special Education	2	20
Other	1	10

All 10 participants agreed to participate in the semi-structured interview process. All 10 participants were contacted via their preferred email address to schedule a semi-structured interview on the Zoom platform. Six of the ten sample participants reached out to schedule the Zoom interview. Semi-structured interviews were scheduled with six of the sample participants. Meeting dates were selected based on the availability of the participants and a Zoom link was sent through secure email. Interviews varied in length from 20 minutes to one hour.

Reoccurring Themes

Data analysis began at the conclusion of each semi-structured interviews. Zoom recordings were reviewed a minimum of four times to verify the accuracy of the transcript – special note was taken to observe for any body

language, hesitations, pauses, fillers, etc. (Bloomberg & Volpe, 2019). Once the accuracy of the transcript was confirmed through multiple viewings of the Zoom recordings, read-throughs were conducted to identify initial themes, categories, and codes across the six interviews (Bloomberg & Volpe, 2019). During the initial readings, sample participants were sent a Word document of their semi-structured interview transcript as part of the member checking process (Koelsch, 2013). All sample participants felt the transcripts of their semi-structured interview were an accurate reflection of their experience. No suggestions or corrections were requested.

During the initial transcript analysis, 188 initial codes emerged. Data were grouped into eighteen initial categories. Further analysis led to the consolidation of codes. Codes initially thought to answer all three research questions, such as *barriers*, were determined to be more applicable to RQ3. The 188 initial codes were reduced to 54 codes after further analysis.

Once grouped by RQ, analysis of the 54 codes led to the emergence of seven categories and seven themes related to the three research questions. (see Table 2). Once the codes were combined and grouped by RQ, distinct categories began to emerge. For example, in response to RQ1, reactions were very different based on the number of years since completing an undergraduate degree. The category of recent increased awareness emerged leading to the theme of *Teacher preparation programs are beginning to address ACEs and social-emotional development*. Newer teachers in the field had more awareness and training on the challenges faced by children exposed to ACEs. *Lack of shared governance* emerged as a category for RQ2. Codes identified multiple entities designing and providing professional development in the school system. A common absence, however, was input from the classroom teachers. Three categories emerged for RQ3. When asked about what teachers need to better support students exposed to ACEs, the codes provided lead the categories of *format of PD*, *PD topics*, and *Student factors*.

Discussion

Implications

This research produced five immediate implications for K-6 pre-service and in-service professional development. Beginning with pre-service training, findings indicate the strong desire for teacher preparation programs to provide more instruction and guidance on supporting students exposed to ACEs in the classroom setting. Although teacher preparation programs are beginning to address social-emotional development and ACEs in the curriculum, K-6 teachers still do not feel adequately prepared to meet the unique needs of students exposed to trauma. The idea that teachers feel inadequately prepared is supported in research conducted by Stites and colleagues (2018) and Zeng and colleagues (2019).

A second implication identified by this research is the need for teacher input into professional development opportunities. K-6 teachers feel current practices in relation to the design and implementation of in-service professional development opportunities do not take the needs of the classroom teacher into consideration. It is

the perception of K-6 teachers' training opportunities do not provide the immediate assistance needed in the classroom to support students exposed to ACEs. Cadero-Smith (2020) indicated when teachers are given a voice and professional development is designed in a co-constructed manner, the quality of training improves. K-6 teacher input into professional development opportunities is further supported by the principles of adult learning theory identified by Malcolm Knowles (1984). Knowles principles were based on the hypothesis that adult learners require a different approach to learning. Unlike the pedagogy associated with teaching young children, adult learning theory supports the active involvement of participants in the identification of topics, the design, and the implementation of adult professional development opportunities (Knowles, 1984). Data collected from this dissertation in practice reinforced Knowles principles of adult learning theory by indicating that K-6 teachers desire the opportunity to provide input into in-service professional development opportunities.

In conjunction with providing input, findings from this research support the third implication of this study. K-6 educators wish to have more in-depth training on topics related to supporting students exposed to ACEs. While some participants indicated a brief knowledge of ACEs, it was the general consensus more in-depth training was needed. Although they may have the knowledge of identification, participants reported they lacked the knowledge needed to effectively support the student and not add to the trauma the child was currently experiencing. Participants reported wanting to make sure their responses to students support them and not exacerbate the issue for the child. The idea of having more relevant and in-depth training is supported by Knowles principles of adult learning theory (1984). Knowles recognized that adult learners wear many hats which can lead to very limited time. Adult learners do not want to spend time in professional development that is not applicable to their current situation (Knowles, 1984). Knowles assumptions of adult learning theory led him to the conclusion that adult learners want training opportunities that are problem-centered and can easily be integrated into their daily lives (1984). Participants in this study sustained Knowles theory by sharing the desire for more problem-centered training that could be more in-depth and provide the knowledge needed to deal with classroom challenges posed by children exposed to ACEs.

A fourth implication of this study is the expressed need for training in proactive strategies to support children exposed to trauma and/or ACEs. K-6 educators desire professional development training that will support proactive measures which can be implemented to avoid or divert unwanted behavior. Participants shared experiences with children that display aggressive, disruptive, and harmful behaviors. In-service training on proactive strategies such as de-escalation, crisis management, crisis prevention, self-regulation, and coping strategies could prevent some behaviors from occurring which can reduce time out of class, absenteeism, and disciplinary action. Sciaraffa and colleagues (2018) describe children that live in "fight or flight" mode. Children exposed to chronic ACEs can have altered brain development which can place them in a state of hyperarousal (Sciaraffa et al., 2018).

Taking a proactive approach can help students learn the self-regulation skills that will help them be successful in the classroom (Rishel et al., 2019). Proactive intervention is further supported by the resilience research conducted by Pataky and associates (2019). Findings indicated that children that demonstrate self-regulation and

resilience can overcome the negative effects of ACEs. To further support the need for proactive intervention/strategies, Conn and associates (2020) conducted research by implementing Promoting Youth Resilience (PYR). High school students were provided instruction and strategies to promote self-regulation and self-control. Findings supported an improved rate of resilience and use of strategies in study participants (Conn et al., 2020). Although limited research is available on effective strategies to support children exposed to trauma in a classroom setting, findings from this dissertation in practice support the desire and need to expose K-6 students to self-regulation strategies early in an effort to avoid the negative effects associated with exposure to ACEs (Ball et al., 2016; Rishel et al., 2019).

The final implication of this research is the need for K-6 teachers to participate in self-care. Teachers must wear many different hats. In addition to high-stakes testing, curriculum requirements, working with parents, paperwork, and behavior challenges, teachers must advocate for their students. Classroom teachers report they live with a great deal of stress (Bottiani et al., 2019). Secondary trauma or compassion fatigue is a common occurrence with K-6 educators (Eyal et al., 2019; Johnson, 2020). Given the current teacher shortage, secondary trauma could be a contributing factor (Sciuchetti & Yssel, 2019). Participants in this study indicated very little if any professional development focused on self-care. Practicing self-care and mindfulness has been found to combat the effects of secondary trauma (Johnson, 2020). Bottiani and colleagues (2019) conducted research exploring the concept of secondary trauma and/or compassion fatigue. Findings indicated that teachers tasked with supporting students exposed to ACEs and trauma often developed compassion fatigue which can occur as a result of trying to provide prolonged support to children living in trauma (Bottiani et al., 2019). Findings further indicated that when teachers were provided with professional development opportunities that centered around self-efficacy and coping skills, personal stress levels decreased. Additionally, Bottiani and colleagues noted a reduction in disruptive behavior exhibited by students (2019). Five of the six participants in this study indicated self-care opportunities are limited or non-existent thus supporting the need to provide in-service training opportunities to assist in the reduction of stress associated with supporting students exposed to ACEs.

Conclusion

Adverse childhood experiences (ACEs) are becoming more prevalent and negatively affecting today's young people (Blitz et al., 2016; Rishel et al., 2019; Waehrer et al., 2020). Ball and colleagues (2016) estimated one out of five children exhibit signs of exposure to ACEs. Early exposure to ACEs has been linked to multiple health and mental health concerns in adults (Merrick et al., 2019; Miller et al., 2020; Waehrer et al., 2020). In an effort to positively affect the trajectory of a child's life and prevent adult health concerns, early identification and intervention are needed (Blodgett & Lanigan, 2018; Sciaraffa et al., 2018).

Children exposed to ACEs are more likely to display delayed academic skills and have a reduced capacity to self-regulate (Sciaraffa et al., 2018). Although children spend the majority of their day in the school setting, teachers report feeling inadequately prepared to meet their unique needs (Cummings et al., 2017; Pataky et al.,

2019; Rishel et al., 2019). Teacher preparation programs provide limited instruction on ACEs and strategies to support children exposed to trauma (Ball et al., 2016). Additionally, teachers report that once in the field, in-service and professional development opportunities do not provide robust learning opportunities for supporting students exposed to ACEs (Ball et al., 2016; Cummings et al., 2017).

Identified Themes

This qualitative descriptive study was designed to explore teacher perception of pre-service and in-service training provided to support students exposed to ACEs. In relation to RQ1, participants identified two major themes regarding the perception of pre-service training. Participants indicated that as more is learned about ACEs, teacher preparation programs are *beginning to incorporate instruction on social-emotional development* and ACEs into the curriculum. An additional theme found was teacher preparation programs well prepare candidates by *providing field experiences* that allow for hands-on opportunities in the areas of content and pedagogy.

In response to RQ2, participants identified two distinct themes. Regarding in-service professional development, participants indicated professional development training was *primarily conducted on programs and content strategies*. If any training was provided on social-emotional development, it was *surface training* and did not provide detailed in-depth training on how to support children exposed to trauma and ACEs. Furthermore, participants reported *limited input* into the types of professional development offered.

Concerning RQ3, participants' responses merged into three themes. The first theme to emerge was the desire to have *input into the professional development* opportunities provided by the school district. In addition, participants identified the need for *more hands-on, in-depth training* to be provided on topics of interest or recognized need such as de-escalation techniques, crisis management, relationship building, and self-care. The final theme to emerge was the need to have specific training on *ways to support students that are dealing with low self-belief*.

Table 2. Themes by Research Question

Research Question	Themes
RQ1: How do K-6 educators perceive pre-service professional development training to have prepared them to support students that have been exposed to Adverse Childhood Experiences?	Teacher preparation programs are beginning to address ACEs and social-emotional development. Teacher preparation programs provide hands-on opportunities in content and pedagogy.
RQ2: How do K-6 educators perceive in-service professional	In-service training focuses primarily on programs and content strategies

development training to prepare them to support

students that have been exposed to Adverse Childhood Experiences?

K-6 teachers have limited input into professional development opportunities

RQ3:

What do K-6 educators perceive as effective training opportunities that would help support them in the classroom when working with students that have been exposed to Adverse Childhood Experiences?

Professional development opportunities that support K-6 students dealing with low self-beliefs are needed.

More relevant hands-on professional development opportunities are needed in K-6 classrooms.

Summary of Findings

The findings of this dissertation in practice can be used to guide pre-service and in-service professional development planning. Following the principles of adult learning theory and collecting input from participants, making training applicable to daily life, and using a problem-centered approach to learning can create training that will meet the identified needs of K-6 teachers and teacher candidates (Knowles, 1984). Although ACEs and the effects of trauma are relatively new areas of study, the themes identified through this research can be utilized to design professional development opportunities that provide robust training to K-6 teachers and pre-service teachers on the strategies and supports needed to support children exposed to ACEs as well as to combat compassion fatigue. Teachers that are better prepared to meet the unique needs of children exposed to ACEs will be in a position to positively affect the life trajectory of students exposed to early trauma (Ball et al., 2016; Rishel et al., 2019).

Recommendations

The purpose of this qualitative descriptive study was to explore teacher perceptions of pre-service and in-service professional development training that is provided to support the needs of elementary students that have been exposed to ACEs in “at-risk”, rural communities in the MOV. Three recommendations for future research emerged from the findings and implications of this study. The desire for specific strategies to utilize in the classroom with students exposed to ACEs was a common thread throughout all interviews. A recommendation for future research would be to explore effective strategies to utilize in the K-6 classroom to support children exposed to ACEs. The absence of literature regarding professional development to support work with students exposed to ACEs leaves this field of research open for future studies.

A second recommendation for future research is a follow-up to the first recommendation. Once strategies are identified and provided in professional development settings, a future study could track the results to determine if the strategy once implemented can be beneficial in supporting students exposed to ACEs. Identifying evidence-based practices for supporting students exposed to ACEs could lead to the implementation of multiple research studies. Although some studies have been conducted in a clinical setting, limited research has been completed within a classroom setting (Frydman & Mayor, 2017; Rishel et al., 2019). A multi-tiered intervention model has been found to be effective for supporting children exposed to ACEs. Multiple studies explored variations of this model and found value and benefit to this method of intervention (Frydman & Mayor, 2017; Rishel et al., 2019; Taylor & Barrett, 2018). However, the aforementioned studies were conducted in conjunction with a social service aspect and with additional support personnel that may not be available in the typical K-6 settings. For this reason, additional research on effective strategies that can be implemented by the classroom teacher is a viable area for future research.

A third recommendation for future research is the exploration of strategies and supports to assist with compassion fatigue and secondary trauma. Participants indicate supports are not in place to assist educators in dealing with secondary trauma and compassion fatigue. Bottiani and colleagues (2019) conducted a study and found that strategies aimed at reducing stress and improving coping skills can have a positive effect on self-efficacy leading to reduced stress in teachers. Additionally, as teacher stress decreased, classroom organization and coping skills improved and student disruptive behaviors decreased (Bottiani et al., 2019). A study conducted by Johnson (2020) found that compassion fatigue led to irritability, moodiness, and depression in teachers. Practicing self-care and mindfulness was found to combat compassion fatigue and lead to more effective support for students exposed to ACEs (Johnson, 2020). Further research in the area of strategies directed at supporting secondary trauma could prove beneficial in preventing teacher burnout, reducing stress and improving student behavior in the classroom (Bottiani et al., 2019; Johnson, 2020).

Limitations

This study was limited to three rural counties in the MOV. The region is plagued with an above-average rate of opioid addiction (Rishel et al., 2019). The increased rate of opioid misuse in the MOV could influence the percentage of K-6 students and K-6 educators that have experienced exposure to ACEs, thus leading to perspectives that are atypical in other geographic areas. Additionally, this study was conducted during the COVID-19 pandemic of 2020. The COVID-19 pandemic of 2020 may have created an additional level of trauma for K-6 students and K-6 teachers. Participants new to the teaching field have not had the opportunity to teach during a COVID-free school year. As a result, perspectives may be different than the perspective of a teacher providing instruction without the added challenge of a pandemic. These identified limitations could potentially have an influence on the results of this study by providing a perspective that may be limited to the MOV.

Future studies conducted in other states and regions could broaden the scope of the research thus providing additional perspectives from participants. Broadening the geographic area of the study could lead to more prepared teachers entering the field and more teachers feeling prepared to support the needs of children exposed to trauma in the classroom. Finding from future studies could be used to guide in-service professional development opportunities thus providing K-6 teachers with the skill set needed to positively impact the future trajectory of students exposed to ACEs (Ball et al., 2016; Rishel et al., 2019).

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School Closure and Distance Learning Gain and Experience: A New Perspective View to Look beyond Learning Loss

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Abstract: Recognizing the limitations of how “learning loss” is conceptualized and measured, this study is attempted to draw lessons by exploring the bright side of school closure and distance learning during COVID-19. The main research question is “What, in reality, valuable experiences are students gained during school closure and distance learning due to COVID-19?”. The study used the results of the debate launched by the New York Times in September 2021. The discussion was about the impact of school closure and distance learning on the various aspects of learning. More than 400 students participated in the discussion. This study focuses on some of the students' responses (37 students) regarding their experiences and the positive side of distance learning (i.e., Learning gains) during school closure. The OECD's framework for social and emotional skills is adopted to identify and categorize the students' responses. The study finds that 18 students (49 %) mentioned that they have valuable experience (i.e., learning gains) related to the “people-mindedness “task performance” domains of the OECD's framework for social and emotional skills. At the skills level, the soft skills of “curiosity”, “sociability” cited by 13 students (35%). Next “self- efficiency 10 students (27%) and then “empathy” 9 students (24%). The experiences and lessons learned can be categorized as knowledge, skills, values, and attitudes. That is, which represents the main components of any educating and learning system and competencies. The study concluded that success in education builds not just cognitive but character fortitude. It is important to recognize the introduction of social and emotional skills, students' well-being, and social relations in the school environment. The interconnected development of cognitive, social, and emotional skills starts during early infancy and continues throughout one's lifespan. Social and emotional skills are widely incorporated into corporate and organizational values.

Keywords: School Closure, Distance Learning, Learning Gain, Learning Loss.

Citation: Mohamed, A. (2023). School Closure and Distance Learning Gain and Experience: A New Perspective View to Look beyond Learning Loss. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 207-217), Denver, CO, USA. ISTES Organization.

Introduction

School closures have been a standard tool in the battle against COVID-19. However, their costs and benefits remain insufficiently known. The suspension of face-to-face instruction in schools during the COVID-19

pandemic has led to concerns about consequences for students learning. Three main approaches or frames are adopted for measuring and tackling learning loss. The psychometric, the commercial, and the economical (see Figure 1).

Categories of approaches and frameworks for measuring learning loss	Description
The psychometric	<ul style="list-style-type: none"> • Here learning loss is framed as predicted skills deficits caused by reduced school time school, which would result in weaker workforce capacity, reduced income for individuals, overall ‘human capital’ deficiencies for nations, and thereby reduced gross domestic product. • Recommended by OECD and the World Bank
The commercial	<ul style="list-style-type: none"> • emphasizes the deployment of psychometric tests of the cognitive development of children not in school. • Adopted by international assessment programs: PIRLS, TIMMS, and PISA
The economical	<ul style="list-style-type: none"> • Here, the tests only measure reading and math, so don’t count for anything else we might think of as ‘learning’. • This is marketed by the testing companies such as Illuminate, Curriculum Associates, and Renaissance and the consultancy McKinsey and Company

Figure 1. Approaches and Frameworks for Measuring Learning Loss.

Here, learning loss is defined as predicted cognitive knowledge and skills deficits caused by reduced time in school based on the number of months during which schools are closed and in no in-person education (i.e., Distance –learning). None of the existing approaches and frameworks were attempted to study and investigate what students have gained and experienced during school closure and distance learning.

Limitations of the existing approaches and frameworks.

Many educators and professors criticized, as follows, how learning loss is conceptualized and measured:

- Students learned immeasurable and previously unknowable things, like how to reset the rhythms and patterns of their days. They've learned more than previous cohorts of students. That is because of what they have lived through and lived without. That is acquired social and emotional skills (soft skills).
- The most radical form of this critique maintains that students haven't missed out on any learning at all; they've just learned different, and possibly more valuable, things.
- 62% of teachers say that students made less progress this past school year than they would have before the pandemic. While, only 24% of parents believed that was true, and 42% said students made more progress.
- Learning loss has become a commercial opportunity not just for testing companies delivering the tests, but for the wider EdTech and educational resources industry seeking to market learning 'catch-up' solutions to schools and families.

Students are talking about what they have learned during school closure and distance learning. That is, including technology skills, global awareness, and resilience.

As Taia student from Chicago wrote:

“How can anything being taught in outdated textbooks ever compare to the real-world experiences we as students have gained in 2020-2021?”

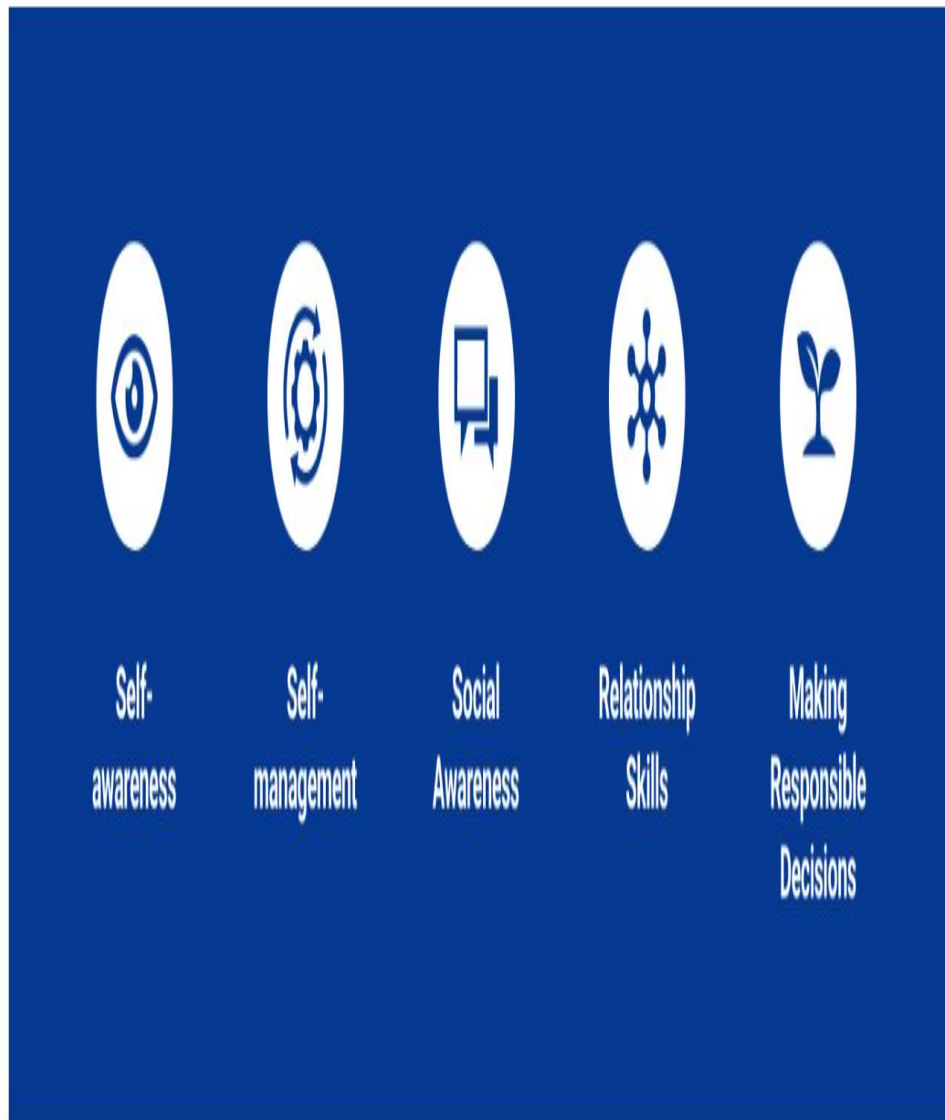
An educator commented “The 2020–21 scholastic year doesn't need a disclaimer. It needs a celebration.”

Aim and Research Questions.

This study is attempted to draw lessons by exploring the bright side of school closure and distance learning during COVID-19. That is namely the “learning gain”.

To achieve such an aim and to get a better sense of what “learning gain” really means, this study asked and answered the following main questions:

- What, in reality, valuable experiences are students gained during school closure and distance learning due to COVID-19?
- Can the experiences acquired be regarded as “learning gain” or skills? How categorized?
- How do they gain skills and interact with other learning and education aspects?
- How are the “learning gain” and skills suitable and meet the needs of corporations, workplaces, and employers?
- In addition: Validating the OECD social and emotional skills (SE) framework.



Learning Gain

Students learned immeasurable and previously unknowable things, like how to reset the rhythms and patterns of their days. They've learned more than previous cohorts of students. That is because of what they have lived through and lived without. That is acquired social and emotional skills (soft skills). This brings us to learning gain – the idea that students are successfully gaining knowledge in new ways.

- Students are in families and communities, learning about what it means to be constrained, learning about their relationship with digital resources, and even learning about the human condition.
- Some parents report that digital learning has given their kids a new interest in school, and more confidence to be themselves, in a space that's more humane and freer of micro-aggressions. Many teachers have even noticed improved academic performance in their

classes.

- There's a lot of talk about learning loss, but teachers can guide students to reflect on all the ways they've grown during the pandemic.
- One teacher stated that "It would be a shame to return to normal without acknowledging any growth that occurred during the pandemic. A reflection that helps us learn more about our students and celebrate their accomplishments and resilience is the perfect way to begin this year".

Methods

Meaning of Social Emotional Learning (SEL)

SEL is a methodology that helps students of all ages to better comprehend their emotions, feel those emotions fully, and demonstrate empathy for others. Five categories are known for SLE skills: self-awareness, self-management, social awareness, relational skills, and making responsible decisions. These learned skills are then used to help students make positive, responsible decisions; create frameworks to achieve their goals, and build positive relationships with others.

Social and emotional (SE) skills, can be defined as, individual capacities that:

- are manifested in consistent patterns of thoughts, feelings, and behaviors,
- can be developed through formal and informal learning experiences, and
- influence important socioeconomic outcomes throughout the individual's life" (OECD 2015, p. 34).

SE skills predict a variety of important outcomes, which include, but are not limited to, health (Bogg and Roberts 2004), academic performance (Chernyshenko et al. 2018; Mammadov 2021; Poropat 2009), and job performance (Barrick et al. 2001; Zell and Lesick 2021).

The Study Framework

This study adopted the OECD framework which categorized learned social and emotional skills (SE), into six personality traits. Each of these domains is further specified in terms of skills or facets that represent more specific aspects of individuals' capability (see Figures 2 and 3).

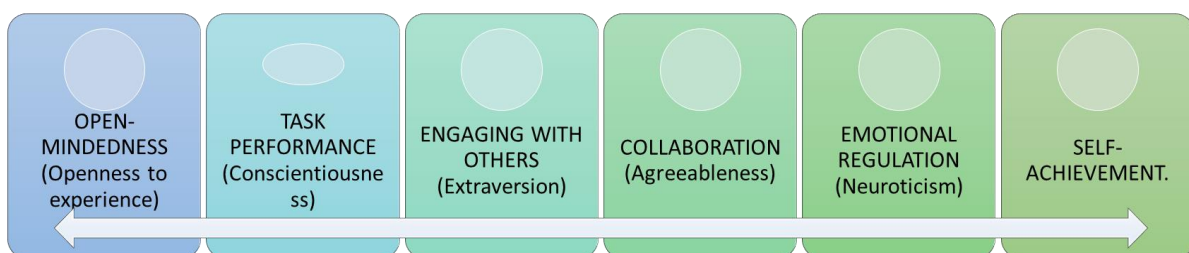


Figure 2: OECD Framework for Social and emotional skills domains

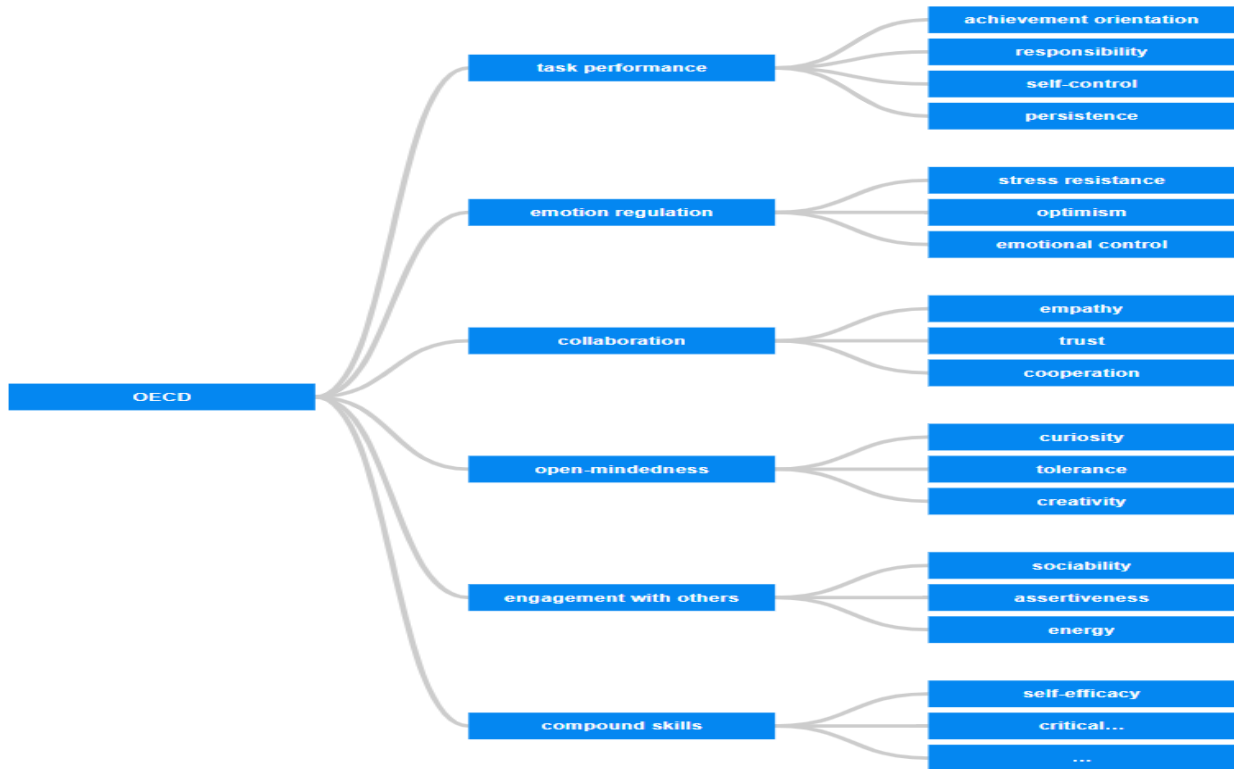


Figure 3: OECD Framework for Social and emotional skills traits

Source of data: <https://www.nytimes.com/2021/04/29/learning/what-students-are-saying-about-learning-loss-during-the-pandemic.html>

Source of data

In September 2021, the New York Times launched a debate about the impact of school closure and distance learning on the various aspects of learning. More than 400 students participated in the debate. This study used the responses of 37 students regarding their experiences and the positive side of distance learning (i.e., Learning gains) to them during school closure.

Results and Findings

Table 1 summarizes the learning gains and experiences mentioned by the respondents. The learning gains and experience are mapped with the OECD framework for SE skills (see Table 1).

At the domain level of social and emotional skills, 18 students (49 %) mentioned that they have valuable experience (i.e., learning gains) related to the “open-mindedness” and “task performance” domains. At the skills level, the soft skills of “curiosity”, and “sociability” were cited by 13 students (35%). Next “self-efficiency” 10 students (27%) and then “empathy” 9 students (24%).

Table 1): The distribution of the learning gains and experience mapped with the OECD`s framework.

Findings (opinions /lessons learnt) from the New York Times debate on students experiences and gains due to school closure and distance learning	Social and Emotional Skills																
	OPEN-MINDEDNESS (Openness to experience)			TASK PERFORMANCE (Conscientiousness)			ENGAGING WITH OTHERS (Extraversion)			COLLABORATION (agreeableness)			EMOTIONAL REGULATION (emotional stability)			SELF ACHIEVEMENT	
	CURIOSITY	TOLERANCE	CREATIVITY	RESPONSIBILITY	SELF-CONTROL	PERSISTENCE	SOCIALITY	ASSERTIVENESS	ENERGY	EMPATHY	TRUST	CO-OPERATION	STRESS RESISTANCE	OPTIMISM	EMOTIONAL CONTROL	ACHIEVEMENT MOTIVATION	SELF-EFFICACY
Grew in responsibility and independence																	
motivation to go school																	
patience and persistence																	
developing the communication skills, adaptability, and resilience																	
Awareness of other situations and needs																	
technology skills,																	
global awareness and resilience																	
knowledge about real-world issues and their everlasting effects																	
students need to catch up with the curriculum, but instead, the curriculum needs to catch up with us.																	
learned a significant amount of life lessons you can't measure on a standardized test.																	
lot of students matured significantly, grown as a person																	
think differently on many pressing issues such as division in government, racism, police violence, etc.																	
communication or teamwork, Knowledge sharing																	
more active and interested in current events																	
able to gather information very easily																	
flexibility or adaptability,																	
More informed																	
more organized																	
These real life lessons are valuable because it shows me who we are as a person and how the world is divided																	
Self motivation and goal-setting																	
Dedication, not giving up																	

Continue -Table 1: The distribution of the learning gains and experience mapped with the OECD`s framework.

Findings (opinions /lessons learnt) from the New York Times debate on students experiences and gains due to school closure and distance learning	Social and Emotional Skills																
	OPEN-MINDEDNESS (Openness to experience)			TASK PERFORMANCE (Conscientiousness)			ENGAGING WITH OTHERS (Extraversion)			COLLABORATION (agreeableness)			EMOTIONAL REGULATION (emotional stability)			SELF ACHIEVEMENT	
	CURIOSITY	TOLERANCE	CREATIVITY	RESPONSIBILITY	SELF-CONTROL	PERSISTENCE	SOCIALITY	ASSERTIVENESS	ENERGY	EMPATHY	TRUST	CO-OPERATION	STRESS RESISTANCE	OPTIMISM	EMOTIONAL CONTROL	ACHIEVEMENT MOTIVATION	SELF-EFFICACY
Time management																	
keep a positive mindset and work attitude in any situation																	
stay positive and happy in multiple situations. This knowledge helps in mental, social, and physical health																	
learned who my close friends actually were																	
realize the importance of seeing my family. Especially my great grandparents																	
be careful with your health and stay safe																	
understand that we are all the same and we should come together																	
realize how important family																	
Know the people who stuck with me through the pandemic																	
I learned that I can still make the best out of the situation I was in																	
realize that you take so many things for granted but you don't realize it until it's gone.																	
learned how to find stuff on my own																	
didn't always need someone to explain something to me																	
needed to stay on top of my learning																	
how to protect myself and others even more																	
how quick something can spread in a short amount of time and affect everyone in their own way																	
Sub-total	13	3	2	7	7	4	13	2	2	9	2	3	3	1	2	2	10
Total	18			18			17			14			6			12	

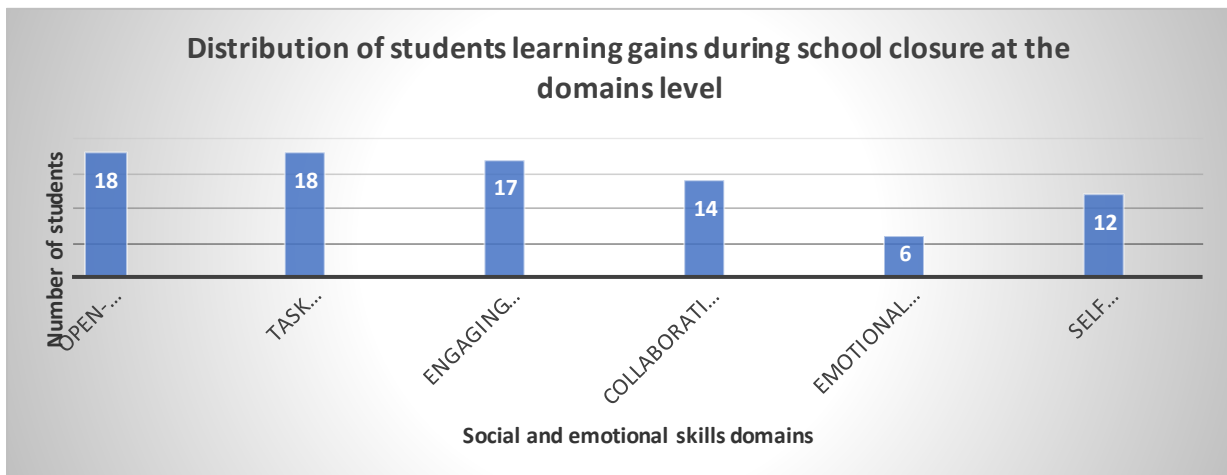


Figure 4: The distribution of the learning gains and experience mapped with the OECD`s framework domains.

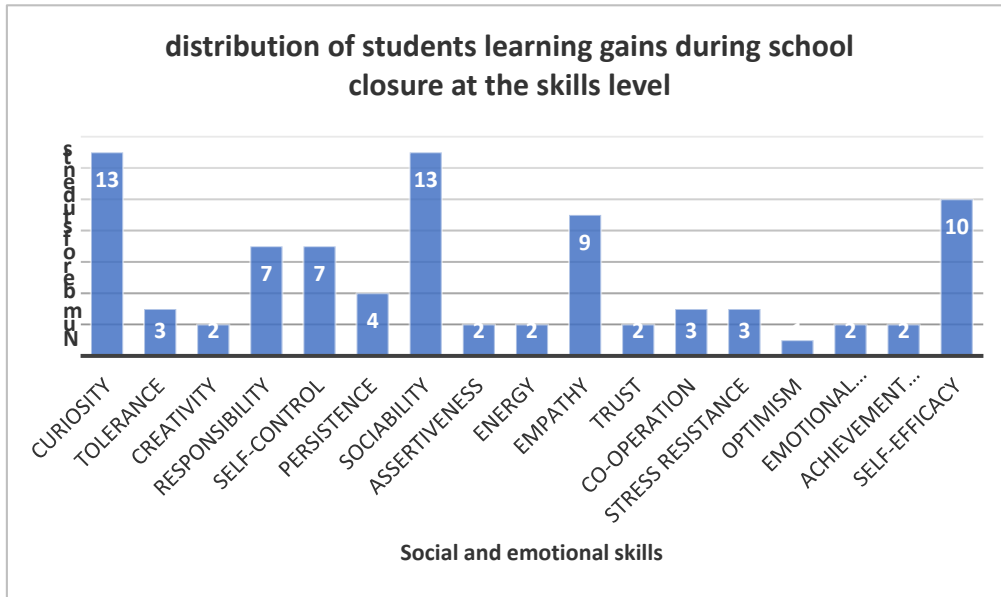


Figure 5: The distribution of the learning gains and experience mapped with the OECD’s framework traits.

Discussion

From a different perspective, the experiences and lessons learned during school closure and distance learning during COVID-19 can be categorized as knowledge, skills, values, and attitudes. That is, which represents the main components of any education and learning system and competencies. Hence, gained skills interact with other learning and education aspects (see figure6).

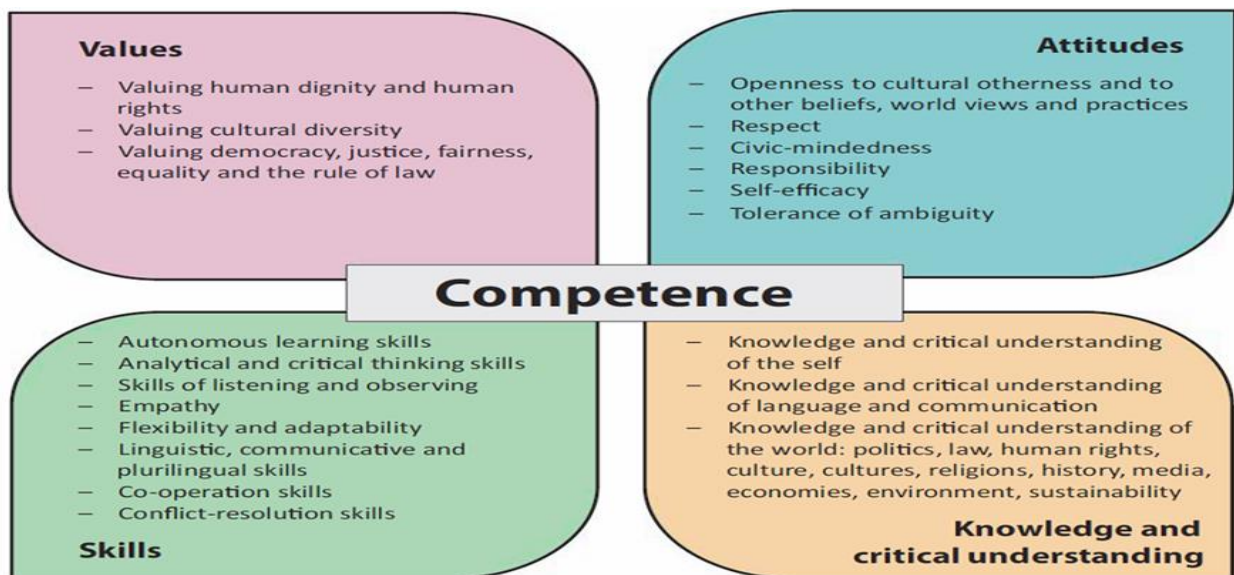


Figure 6: Categories of learning competencies.

Practical implications

Social and emotional skills are widely incorporated into corporate and organizational values. Hence, the “learning gain” and skills identified are suitable and meet the needs of corporations, workplaces, and employers (see Figure 7).

Company	Corporate Values (keywords)	link
	Inspire, Engage, and Create.	https://www.sabic.com/en
	High Performance, Teamwork, Commitment, Social Responsibility	https://careers.rcjy.gov.sa/
	Innovation ,Serving the Community, Respect for All	https://www.alinma.com

Figure 7: Examples of corporate values related to SE skills.

Moreover, social, and emotional skills constitute 21st-century skills (see Figure 8).



Figure 8: The relationship between SE skills and 21st-century skills.

Understanding the nexus between social-emotional skills, cognitive growth, mental health, and socio-economic outcomes is important for policymakers, educators, parents, and teachers alike.

Conclusions

Success in education today builds not just cognitive but character fortitude. It is important to recognize the introduction of social and emotional skills, students' well-being, and social relations in the school environment. We need to think in more integrated and creative ways. Live and work together resiliently and productively. Tomorrow's schools need to help students think for themselves and join others, with empathy, in work and citizenship. These are the places where students can learn how to motivate and organize their learning, where teachers stimulate their curiosity and build on and channel their creativity, sociability, and energy. The interconnected development of cognitive, social, and emotional skills starts during early infancy and continues throughout one's lifespan.

Further research

It becomes increasingly clear that it is important to have reliable, validated measures of students' SE skills. Here we argue that framework and design are additional important considerations for the development and selection of SE skill assessments.

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A Thematic Analysis of HBCU Biology Program Mission Statements

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Abstract: Historically Black Colleges and Universities (HBCUs) demonstrate success in facilitating pathways for STEM graduates into the STEM workforce, and this phenomenon has been widely documented (Gasman & Nguyen, 2014; Upton & Tanenbaum, 2014; Clewell et al., 2016). Although thematic analysis of the mission statements of HBCUs at the institutional level have been conducted (Albritton, 2012; Bryan & Stewart, 2016), similar analysis has not been conducted at the departmental or program level of many discipline-specific STEM areas at HBCUs. In the present thematic analysis, departmental and programmatic mission statements in biology at 28 HBCUs were evaluated to determine the emergent themes that characterize and potentially contribute to student retention and success in biology at HBCUs. Among all Carnegie classes, the 2 most frequent themes included: STEM/ Healthcare Workforce Preparation and Skill Development. The 2 least frequent themes were Diversity & Inclusion and non-STEM Student Science Education. This emphasis on workforce preparation and skill development at the level of the academic unit may provide additional insight into the success of HBCUs in facilitating pathways for URM graduates into advanced training programs and promoting retention of URM professionals in the STEM workforce.

Keywords: HBCU, Thematic analysis, Mission statement, Biology program

Citation: McSween, V. & Sealey, K. (2023). A Thematic Analysis of HBCU Biology Program Mission Statements. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 218-231), Denver, CO, USA. ISTES Organization.

Introduction

The term Historically Black Colleges and Universities, HBCUs, encompasses a diverse network of institutions that promote excellence, equity, and opportunity for scholars of all races across the nation. However, they are unified in that they are majority-minority institutions of higher education, established prior to 1964, with a principal mission of supporting and serving the educational needs of the African American community (Aud et al., 2010). HBCU success in facilitating pathways for STEM graduates into the STEM workforce has been widely documented (Gasman & Nguyen, 2014; Upton & Tanenbaum, 2014; Clewell et al., 2016). Although HBCUs make up only a minority of postsecondary institutions in the U.S. and matriculate a minority of black students nationally (De Brey et al., 2019), one third of STEM doctoral graduates have been conferred

undergraduate degrees by HBCUs (Upton & Tanenbaum, 2014). Likewise, a subset of HBCUs is noted to be the top producers of Black STEM PhDs nationwide (National Science Foundation [NSF], 2011; Upton & Tanenbaum, 2014). Black STEM PhDs that are members of other minoritized groups, for example women, are more likely than not to have received their undergraduate or graduate degree from an HBCU (Upton & Tanenbaum, 2014).

When considering the institutional pathways to graduate degree completion, among STEM PhDs 32% of males and 43% of females completed either their undergraduate, graduate, or both degrees at an HBCU (Upton & Tanenbaum, 2014). These percentages were also found to differ based on STEM discipline, for example, among Black PhDs in biological or biomedical sciences approximately 39% of recipients completed either their undergraduate, graduate, or both degrees at an HBCU (Upton & Tanenbaum, 2014). Approximately 40% of Black STEM PhDs identify as first-generation college students and are more likely to complete their undergraduate education at an HBCU in contrast to non- first-generation Black STEM PhDs (Upton & Tanenbaum, 2014). Participants of the HBCU- Undergraduate Program, funded by the National Science Foundation, have higher rates of graduate degree completion and greater success in entering STEM careers than African American students on the national scale (Clewel et al., 2016).

These outcomes highlight the crucial role of HBCUs in STEM undergraduate education and building successful pathways for minorities into advanced degree programs in STEM and STEM career fields. HBCUs provide nurturing learning spaces for students traditionally marginalized and underrepresented in STEM. These unique institutions can serve as models in best practice for educating and retaining URM students (Rankins, 2019).

A mission statement is a statement of purpose that directs the strategic planning, goal orientation and implementation of activities by an organization. It serves to distinguish one organization from another similar organization (David & David, 2003). Mission statements have versatile utility and can serve as a tool to facilitate communication among internal and external stakeholders, and to facilitate effective strategic planning, as well as guide organizational decision- making (Fitzgerald & Cunningham, 2016). Post- secondary institutions utilize mission statements to communicate their utility and communicate with stakeholders that may have specific expectations for institutions within higher ed (Morphew & Hartley, 2006). Mission statements of post-secondary institutions should integrate elements that form the basis for a mission in higher education (Morphew & Hartley, 2006).

Thematic analysis of the mission statements of postsecondary institutions have reported a myriad of themes relevant to their respective institutional mission, including but not limited to, leadership, citizenship, cultural diversity, life- long learning, academic achievement, and technology (Wang, 2007). Thematic analysis based on institutional criteria, like four- year versus two- year institutional status, identified statistically significant thematic differences between the two classes of institutions (Wang, 2007). Similar analysis of public and private institutions across multiple Carnegie classifications identified notable thematic similarities and differences among institutions (Morphew & Hartley, 2006). Although mission statements exist at the institutional level,

other organizational areas within an academic institution may have their respective mission statements for example, at the school, college, or program level. These mission statements are more focused on the needs of the academic area stakeholders, but still align closely with the overall mission of the institution. Further research is needed to elucidate how institutional mission statements are expressed on the programmatic level (Morphew & Hartley, 2006).

Prior thematic analysis of HBCU institutional mission statements revealed an emphasis and commitment to both liberal arts and professional education for learners at their respective institutions (Gasman & McMickens, 2010). Additional themes that characterized the mission statements of these institutions included a commitment to morals, ethics, and community service (Gasman & McMickens, 2010), as well as village pedagogy (Harris III, 2012) which can be described as intentional awareness and commitment to facilitate community that enhances the educational experience of learners. Institutional missions of HBCUs can be further adapted by departmental units to generate more specific mission statements that meet the targeted goals of the department and the needs of their discipline specific learners (Bryan & Stewart, 2016).

Although thematic analysis of HBCU mission statements at the institutional level have been conducted (Gasman & McMickens, 2010; Harris III, 2012; Albritton, 2012; Bryan & Stewart, 2016), similar analysis has not been conducted at the departmental or program level of many discipline- specific STEM areas. A more focused thematic analysis at a different hierarchical level, notably the academic unit that interacts more directly with STEM students, may facilitate the emergence of additional or discipline specific themes that impact STEM student success among URM students.

In order to better understand the contribution of HBCUs to STEM student success, the current study uses a primarily qualitative approach to investigate the mission statements of HBCUs in a discipline- specific context, specifically at the departmental or programmatic level. The current article reports on the findings of a thematic analysis evaluating the mission statements of biology and biology- related departments/ programs. What are the recurring themes among the mission statements of HBCU biology departments/ programs that contribute to the success of HBCUs in URM biology student retention?

Method

Data Collection

The current study conducted an online survey of Historically Black Colleges and Universities, as identified using the US Department of Education's National Center for Education Statistics (NCES) database. Data from the Integrated Postsecondary Education Data System (IPEDS) was accessed using the College Navigator website. IPEDS provides basic data on postsecondary institutions in the U.S. that participate in student financial aid programs. The Carnegie classification for each institution was recorded. The Carnegie Classification of Institutions of Higher Education is a nationally recognized framework for classifying colleges and universities in the United States. The classification system is based on the degree offerings and research emphasis of the

respective institution.

Initial search criteria included having a specialized mission of being a Historically Black College or University. From these institutions, HBCUs that met the additional criteria of having a clearly indicated mission statement for the biology- related department or program area were selected to be included in the qualitative analysis. Institutions that lacked clearly defined mission statements for their biology departments or programs were excluded from the analysis. This resulted in a final cohort of 28 institutions. Mission statements were identified from two main online sources accessed via the respective university's official website. Online materials included the school, college, department, or program webpage or the most current and accessible university catalog.

Data Analysis

Identified mission statements were subsequently collated based on the respective Carnegie classification of the institution. Delve CAQDAS (computer- assisted qualitative data analysis software) was utilized as the analytic tool to facilitate coding and then organization of initial codes into researcher- generated themes. Two graders independently coded the mission statements. Graders subsequently discussed coding to rectify any differences in coding of the data set. An inductive coding method was used to generate initial codes from the analysis of the mission statement text. Subsequently, codes were analyzed and sorted into categories. The emergent categories were identified as overarching themes.

The frequency of each theme among all HBCUs and the frequency of each theme based on the respective Carnegie class of institutions was calculated. The most frequent and least frequent themes were reported for each Carnegie class, and a comparison was made across all classes. Unique themes, being defined as themes noted in only one Carnegie class or a subset of Carnegie classes were also reported.

Results

An NCES search for HBCUs generated a list of 101 institutions; while, application of the additional criteria resulted in selection of 28 institutions that were selected to perform the thematic analysis of biology department/ program mission statements. This cohort represents approximately 28% of HBCU institutions, and a subset of Carnegie classes found within the original NCES search (see Table 1). Six of the twelve initial Carnegie Classes (50%) are represented within the cohort. These classes include: Doctoral Universities (DU): High Research Activity, Master's Colleges & Universities (MCU): Larger Programs, Master's Colleges & Universities: Medium Programs, Master's Colleges & Universities: Small Programs, Baccalaureate Colleges: Arts & Sciences Focus, and Baccalaureate Colleges: Diverse Fields.

During the qualitative analysis, 92 unique codes were generated. These identified codes were then collated into 8 categories, and subsequently identified as 8 major themes (see Table 2 & Figure 1). The number of themes

represented by each of the 6 Carnegie classes ranged from 4 to 7; no Carnegie class contained all 8 themes. Master's Colleges & Universities: Small Programs represented the fewest themes (n=4), while Master's Colleges & Universities: Larger Programs, Baccalaureate Colleges- Diverse Fields, Baccalaureate Colleges- Arts and Sciences Focus, Doctoral Universities- High Research Activity represented the highest number of generated themes (n= 7). Master's Colleges & Universities: Medium Programs represented an intermediate number of themes (n=6).

Table 1. Carnegie Classification of all HBCUs versus cohort selected for thematic analysis

Carnegie Classification	Count (n= 101)	Count (n=28)
Doctoral Universities: High Research Activity	11	4
Master's Colleges & Universities: Larger Programs	7	5
Master's Colleges & Universities: Medium Programs	11	2
Master's Colleges & Universities: Small Programs	6	2
Baccalaureate Colleges: Arts & Sciences Focus	16	3
Baccalaureate Colleges: Diverse Fields	30	12
Baccalaureate/Associate's Colleges: Mixed		
Baccalaureate/Associate's	3	0
Associate's Colleges: High Transfer-Mixed Traditional/Non-traditional	1	0
Associate's Colleges: High Vocational & Technical-Mixed		
Traditional/Non-traditional	9	0
Associate's Colleges: High Vocational & Technical-High		
Non-traditional	1	0
Special Focus Four-Year: Faith-Related Institutions	4	0
Special Focus Four-Year: Law Schools	2	0

Among all Carnegie classes, the most frequent themes were STEM/ Health Workforce Preparation and Skill Development. The least frequent themes were Diversity & Inclusion and non- STEM student science education. When separated by Carnegie classification, this pattern was primarily found to be consistent for most classes. Diversity & Inclusion represented a unique theme that was only mentioned in Baccalaureate Colleges- Diverse Fields. The emergent themes from most to least frequent included: STEM/ Health Workforce Career Preparation, Skill Development, Engagement in Curricula/ Pedagogy, Enrichment Opportunities, Professional/ Graduate Studies Preparation, Quality Learning Environment, non- STEM student science education, and Diversity & Inclusion.

Several instances of co- occurrence of codes were found throughout the analysis. For example, the code “science- related careers” was found to co- occur with “professional studies”, “graduate studies”, and “health

profession careers”. While the code “research experiences” was found to co- occur with “scientific Inquiry”, “faculty scholarship”, “lab settings”, “hands on skills”, and “life- long learning”. The most frequent co-occurrence was between the codes “graduate studies” and “professional studies”.

Table 2. Frequency of themes identified by respective Carnegie Classification

THEME	Carnegie Classification						TOTAL
	MCU: Larger Programs	MCU: Medium Programs	MCU: Small Programs	BC: Diverse Fields	BC: Arts and Sciences Focus	DU: High Research Activity	
STEM/ Health Workforce Career Preparation	24	8	3	28	6	13	82
Skill Development	9	17	3	13	3	14	59
Curricula/ Pedagogy	6	8	4	14	4	2	38
Enrichment Opportunities	6	3	0	14	2	4	29
Professional/ Graduate Studies Preparation	4	3	1	13	4	4	29
Quality Learning Environment	11	1	0	7	1	4	24
non- STEM Student Science Education	1	0	0	0	3	1	5
Diversity & Inclusion	0	0	0	5	0	0	5

STEM/ Health Workforce Preparation

Workforce preparation in STEM and health- related disciplines was the most frequent theme among all Carnegie

classes. These departmental units emphasize career readiness in order to “enable students in Biology to become outstanding contributors in their areas of interest and in society at large” and to promote “the development of tomorrow’s leaders in professions utilizing biological knowledge”, as well as “prepare them for employment or professional advancement” as noted by Philander Smith College, Tuskegee University and Lincoln University. A multipathway approach to participation in the STEM workforce was highlighted by institutions, for example, Alcorn State University “prepare[s] students to excel as professionals, scientist[s], teachers or productive employees to serve the community, the state, the nation and globally in areas related to the life sciences.” Likewise, West Virginia State University supports students “planning careers in science, medicine, or allied health sciences; [or] planning careers as science teachers” and Kentucky State University focuses on readiness for “teaching positions in biology and related fields and careers in industry”. Alabama A&M University is preparing students “for careers in teaching, research and public services” and to be “well prepared for positions in public and private institutions”; likewise, Tennessee State University is preparing students “for acquisition of entry level positions in the job market or ... seeking certification for secondary teaching careers”; while, Alabama State University is getting students “prepared for entry into teaching, research, industry, government and private sector endeavors, as well as further study for entry into scientific research and health professions fields”.

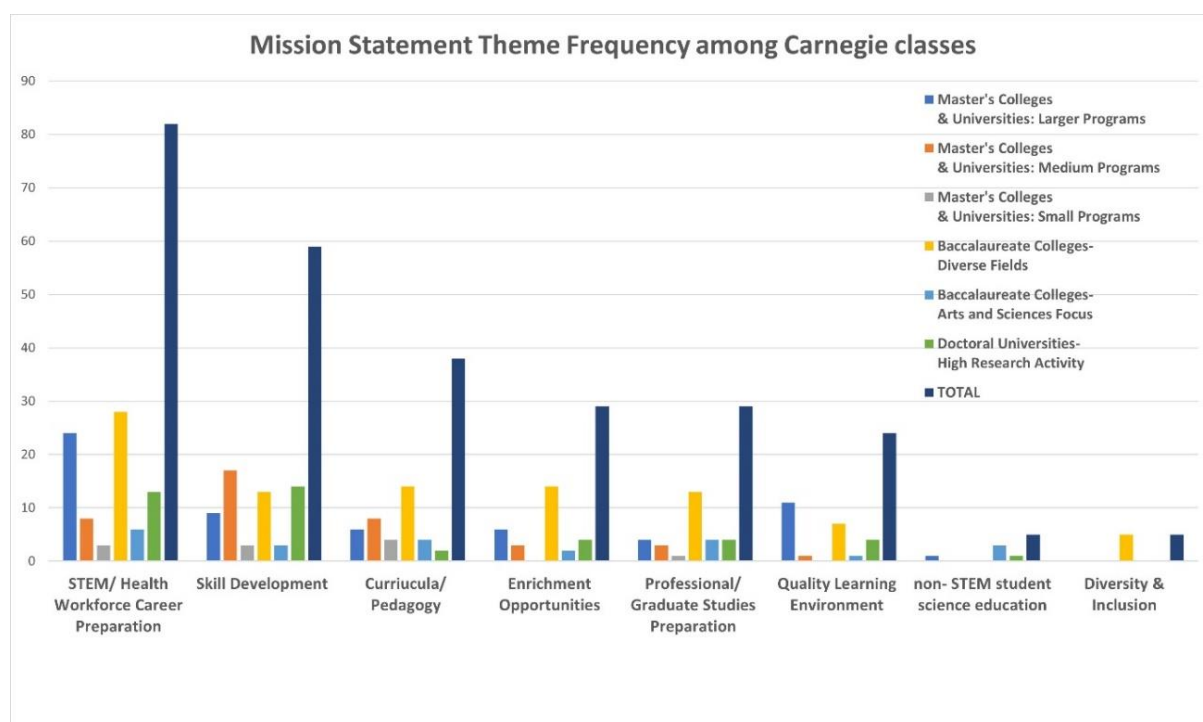


Figure 1. Frequency Histogram of Themes Identified by Respective Carnegie Classification

In some instances, institutions mentioned specific STEM or health-related careers. For example, “science and engineering careers” and “careers as environmental scientists and secondary school biology teachers” as noted by Livingstone College and Grambling State University. Multiple schools explicitly mentioned the STEM Workforce as part of their mission statement. Cheyney University of Pennsylvania’s efforts to prepare “students

to join the Science, Technology, Engineering and Math (STEM) workforce” and Bowie State University’s efforts “to equip our graduates with the knowledge, skills and abilities required by the future STEM workforce”. Terms such as “excel”, “productive”, and “outstanding contributors”, highlight the academic units’ mission to generate a cohort of quality STEM professionals that develop the required competencies and proficiencies to meet the demanding needs of the current and future STEM workforce, as well as “further preparation for their field of choice, thus aiding in the transition to the next level of their careers” as indicated by Cheyney University of Pennsylvania.

Skill Development

The learner skills targeted for development included a range of skills, both cognitive and non- cognitive. Many of the skill sets were scientific skills required to be successful in demanding STEM careers. Scientific skills included “scientific reasoning, critical inquiry, problem solving, and the development of research skills”, “laboratory-based and analytical skills” “critical reasoning, intellectual inquiry, and mastery of the scientific jargon... practice of scientific inquiry...to formulate testable hypotheses, design experiments and analyze data” “academic, social, scientific, computer, and mathematical skills.... enriched by critical and analytical thinking skills” and “competency in the use of modern biological techniques, critical thinking, analysis, interpretation and presentation of data”, as noted by Clark Atlanta University, Kentucky State University, Tuskegee University, Benedict College, and Florida Agricultural and Mechanical University, respectively. Other skill sets included non- cognitive abilities with relevance to advanced training programs or careers in STEM disciplines. These non- cognitive skills include leadership, collaboration, citizenship, and ethics. For example, Tuskegee University and Florida Memorial University “promotes leadership and collaborative skills” and “prepares its students for responsible participation and leadership in an ever-changing technologically advanced global society”, respectively.

Southern A&M College and Kentucky State University train students to develop “ethical behavior in experimental design and practice” and “the ethical mindset to be engaged citizens”. Likewise, Cheyney University of Pennsylvania aims “to educate and train.... students in the science, technology, and mathematics disciplines to become life-long learners, problem solvers, and environmentally responsible citizens”. Also noted is Savannah State University’s emphasis on key skills such as scientific literacy and science communication “to acquire and critically interpret knowledge of scientific facts and theories of biology, to relate that knowledge to other subject areas and to communicate his or her understanding to others”. Learners are prepared with a toolkit of diversified skills that are translatable and adaptable to multiple fields of STEM such as “a board-based [sic] understanding of the principles of biological sciences that fully exploit existing and emerging technologies”, “a solid academic foundation in the biological and environmental sciences with skills for further educational opportunities”, and “opportunities for greater specialization in emerging fields” as noted by Alcorn State University, Alabama A&M University, Tuskegee University. This array of diverse skill sets is translatable to multiple fields of STEM, as well as healthcare- related fields. This approach to building both technical and 21st century skills may support multi- dimensional development among student learners.

Curricula and Pedagogy

Many programs emphasized their curricula or pedagogical practices that effectively facilitate student learning and achievement. Southern University A & M College stated that it “recognizes excellent student education as its first priority”. This sentiment was implicit in multiple mission statements. Curricula and Pedagogy was described either through description about the curricula or pedagogy or examples of learning activities within the curriculum. For example, Clark Atlanta University “prepares graduates to be competitive in our global society” and Florida Memorial University “provides a challenging and supportive environment that prepares its students”. Similarly, University of Arkansas at Pine Bluff offers a “rigorous program for academic instruction in the biological sciences for students” and University of the Virgin Islands’ faculty are engaged in “academic and pedagogical advancement”. Dillard University provides “a broad background in biology with sufficient flexibility to satisfy a wide variety of individual interests and career objectives”, while Savannah State University encourages students “to relate that knowledge to other subject areas” and Tuskegee University offers “opportunities for greater specialization in emerging fields”. In a similar manner, Livingstone College “provide[s] students with a world- class education and academic experiences”. Curricula was described as “a combination of required courses and electives”, “core biology courses supplemented with biology electives”, “a proactive undergraduate curricula”, “interdisciplinary curriculum experiences which are enriched by critical and analytical thinking skills”, “a comprehensive educational program”, and “curriculum [that] embraces the breadth of the discipline and values both classical and modern approaches of biological inquiry” by Dillard University, Bennett College , Alcorn State University, Benedict College, Tougaloo College, and Langston University, respectively. Wilberforce University offers “a solid foundation in the fundamental areas of biology necessary for careers in modern biological science” and Alabama State University notes that “students’ development is supported through subject competency”. Descriptive terms such as “excellent”, “rigorous”, “world- class”, “proactive”, “enriched”, “comprehensive”, “solid foundation” and “breadth of the discipline” emphasize the intended rigor of the curricula.

Enrichment Opportunities

Enrichment Opportunities offered by programs included internships, research experiences and training, as well as participation in course- based undergraduate research experiences. University of the Virgin Islands provides “opportunities to participate in internships as well as research at both the local and national level”, Bowie State University noted its use of “high impact educational practices, such as course- based undergraduate research experiences (CURE)”, while Alcorn State University offered students an opportunity to “contribute to the advancement of the knowledge and the new truths through scholarly research and inquiry”. Additional enrichment opportunities included, community service, teaching/ laboratory assistantships, experiential learning, and access to institutional collaborations. Many of these enrichment opportunities are high- impact educational practices known to promote student success and persistence within higher education, most notably among demographic groups historically underserved in post- secondary education. Enrichment opportunities were identified in every Carnegie class, with the exception of Master's Colleges & Universities: Small Programs.

Professional/ Graduate Studies Preparation

The biological science departments and programs offer educational curricula designed for preparation not only for the STEM workforce, but “designed to prepare undergraduate students for.... advanced studies”, as noted by Livingstone College. Reference to training to improve entry or admission into advanced training programs was noted by multiple institutions. Terms included, “graduate and professional schools”, “graduate/professional programs” “life science graduate training programs”, “graduate school, professional school”, “postgraduate education”, “professional or graduate studies” as indicated by Wilberforce University, University of Arkansas at Pine Bluff, Tennessee State University, Bennett College, Bowie State University, and Alcorn State University, respectively. Some listed specific disciplines, for example, Tougaloo College supported learners who intend to pursue “graduate school in various fields of Biology or professional school in medicine, dentistry, allied health and other related areas” and Alabama A & M University supported those with interest in “graduate and professional studies in the biomedical, biological, natural resources and environmental fields”.

Quality Learning Environment

A commitment to a quality learning environment was explicitly stated by some institutions, while implicitly stated by others. For example, Southern University A & M College “seeks to provide quality instruction” and “aspires to maintain quality instruction”; similarly, Bowie State University “provides quality education” and Alabama State University focuses on “providing quality learning” to students. Noted features of a quality learning environment provided by programs included access to “comprehensive support, [and] resources”, “small class sizes and individual attention”, and engagement in “scholarly activities”, noted by Delaware State University, Lincoln University, and Florida Memorial University, respectively. Also characteristic of the quality learning environment was a scholarly atmosphere inclusive of both faculty and student scholarship. For example, Southern University A & M College highlighted “an atmosphere that encourages a free exchange of ideas”, while Bennett College aimed “to develop scholarship.... within the students”. Other institutions, like Southern University A & M College and Alabama State University, emphasized the importance of faculty scholarship, by stating the need for “faculty to engage in scholarship” and participate in “continuous faculty scholarship”. The University of the Virgin Islands also noted its faculty’s commitment to “scientific research”. Another feature of the quality learning environment was the unit’s commitment to facilitating and supporting academic goal attainment for students. This is illustrated by the University of the Virgin Islands’ commitment “to helping students excel academically”, Southern University A & M College’s aim to “provide the best educational opportunities possible for students to attain their academic goals” and Grambling State University’s approach that “strives to help students reach their full potential and academic goals”. Some institutions also emphasized their intention to not only meet the academic but also the non- academic needs of learners by purposefully creating a nurturing environment for students. For example, Florida Agricultural and Mechanical University “strive[s] to always provide “Excellence with Caring””; likewise, Cheyney University of Pennsylvania “provides a supporting and nurturing environment” for learners. Quality learning environment was identified in every Carnegie class, with the exception of Master's Colleges & Universities: Small Programs.

Non- STEM Student Science Education

Non- STEM student science education was a minor theme. Although these departments/ programs are committed to science education for their own students, they also provide science learning opportunities for non-STEM students, or service- courses for other majors. For example, Tougaloo College provides courses for “those who take Biology as part of their liberal arts education”, and Cheyney University of Pennsylvania provides courses that are “offered for non-majors in order to educate all students in science...”. Florida Agricultural and Mechanical University “serves non majors” and “exposes other students to biological concepts that impact their lives”, and Southern University A & M College “seeks to provide quality instruction to biology majors, majors in other sciences, and non- science students enrolled in biology courses”. Also noted is Tennessee State University’s approach to science learning that seeks to integrate formal and informal science learning by attempting “to raise the level of understanding of and interest in life science processes in the scientific and general communities”.

Diversity and Inclusion

Diversity and Inclusion was identified in only one Carnegie class, Baccalaureate Colleges- Diverse Fields. Lincoln University utilized diversity in reference to student background and the society at large by stating “for students from various backgrounds to be successful in a complex, technological and diverse society”, while West Virginia State University utilized diversity only in reference to its target population of learners, “to serve a diverse community of students”. The remaining institutions provided more context for their use of the term diversity by more explicitly clarifying their target populations. For example, University of Arkansas at Pine Bluff noted that it offered a “rigorous program for academic instruction... for students from all socioeconomic levels of the population”, Florida Memorial University by highlighting its value of being “broadly inclusive to meet the academic needs of national and international students”, and similarly Kentucky State University aims to “prepare our undergraduate students, especially those from underrepresented groups and minorities”.

Discussion

The current study utilized a more focused thematic analysis of HBCU mission statements at the hierarchical level of the academic unit as opposed to institutional, and in a discipline- specific context in order to identify emergent themes that contribute to HBCU success in generating URM STEM professionals.

As reported earlier, only 50% of the original 12 Carnegie classes were represented in the cohort selected to perform the thematic analysis. This difference may be attributed to several factors. For example, some institutions may not have STEM departments/ programs but may only offer a few STEM or science related courses as part of a wider curriculum. For example, some institutions as noted by the Carnegie classification have a vocational/ technical emphasis, or another specialized emphasis, like faith or law. In other instances,

institutions may have biology departments, but they did not have mission statements or alternatively mission statements that were accessible for the researchers' analysis.

Diversity and Inclusion was only identified in one Carnegie class, Baccalaureate Colleges- Diverse Fields. One potential reason for limited reference to diversity throughout the cohort of mission statements may be an implied as opposed to an explicit diversity reference due to the unique historical mission of HBCUs. It may already be implied what the primary target population of learners are, for example learners from a particular racial background, or as mentioned by Taylor and Morphew (2010) HBCUs and religious institutions were more likely than non- HBCUs or non- religious institutions to identify their target population in their institutional mission statements. Likewise, an institutional mission statement analysis conducted by Harris III (2012), noted a diversity reference by 67% of HBCUs. Perhaps, departments/ programs omitted diversity references from academic unit mission statements because they were already utilized in an institutional context. Creamer and Ghoston (2012) also note that the use of "diversity" is not a frequent code among engineering units and appeared in less than one third of all mission statements from their random sample of institutions. Non- STEM student science education was also a minor theme and not a primary focus but a supplemental role of the departments/ programs to assist other program areas in meeting their goals.

Previous studies noted that a college's claim to excellence was often in reference to its curriculum (Taylor and Morphew, 2010). Within this cohort of programs, elements such as an emphasis on cognitive and non- cognitive skill development, development of targeted curricula and pedagogy, access to enrichment opportunities, and creation of a quality learning environment were revealed by thematic analysis. Such features may collectively influence the training environment and learning culture within these departments and programs to provide a framework for effectively preparing minority scholars to successfully pursue careers in STEM or healthcare. HBCUs "provide supportive learning environments that encourage the pursuit of academic excellence", and learners at HBCUs "benefit from a strong and committed network of faculty, staff, and professional leaders who seek to offer learning opportunities that will increase possibilities for long-term success" (Albritton, 2012). HBCUs make significant pedagogical contributions that contribute to the persistence of underrepresented groups as academics and intellectuals within the landscape of U.S higher education (Bettez & Suggs, 2012).

As noted, workforce preparation in STEM and health- related disciplines emerged as the most frequent theme. Historically, HBCUs have served a central role in strengthening the academic skill sets of minority learners through a dual emphasis on academic enrichment and career preparation (Albritton, 2012). HBCUs provide opportunity and capacity to build the "educational foundations for continued academic success" of learners beyond undergraduate degree completion and promote success in advanced training programs (Bettez & Suggs, 2012). Career readiness and readiness for advanced training programs in discipline- specific areas are important factors for increasing representation and participation of diverse candidates in graduate and professional training programs and the national STEM workforce (Tsui, 2007; Byars- Winston et al., 2011; Estrada et al., 2018; Kendricks et al., 2019; Odedina et al., 2022).

Conclusion

This emphasis on workforce readiness and the development of translatable skills among learners, as well as the noted features of the training environment may provide additional insight into the success of HBCUs in facilitating pathways for STEM graduates into the STEM workforce and promoting retention of STEM professionals from underrepresented backgrounds in varying STEM fields.

Recommendations

Future studies may find value in investigating the mission statements of other discipline- specific departments or programs in STEM housed at HBCUs. Analysis may identify additional themes relevant to how HBCUs provide support structures to promote URM student success and entry into advanced training programs that serve as a gateway to STEM careers. This investigation may identify common themes among varying STEM disciplines, or alternatively reveal discipline- specific themes that facilitate URM success in a more limited context.

Acknowledgements

This material is based upon work supported by the National Science Foundation under Grant No. 1946412.

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Investigating Perspectives of An Online Syllabus's Design and Interactivity in An Asynchronous Course

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Abstract: This study aimed to investigate undergraduates' perspectives of online syllabus design and interactivity in an asynchronous geoscience course. The study was grounded in previous research on syllabus design and interactivity and used a multiple case study design to gather data from five participants. The course had multiple sections, each with a customized syllabus that varied in design and interactivity. The findings suggest that students were motivated to engage with the course syllabus when it included design and interactivity. The use of tabs to organize syllabus content was found to be an effective form of interactivity for searching information and breaking down content. Online syllabi with design were found to be easy to read, but syllabi with design and no interactivity were criticized for causing excessive scrolling. The study's results highlight the importance of incorporating both design and interactivity in online syllabi to enhance student learning experiences. Future research could explore the impact of visual syllabi on student motivation and engagement in other academic disciplines and with other student populations.

Keywords: Online Syllabus, Design, Interactivity, Engagement, Higher Education

Citation: Dinç, E., Babb, J. S., & Wherley, M. S. (2023). Investigating Perspectives of an Online Syllabus's Design and Interactivity in an Asynchronous Course. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 232-242), Denver, CO, USA. ISTES Organization.

Introduction

Using visual syllabi, which offer course information in an understandable and visually appealing fashion, is advantageous for students in a variety of ways. First, a visual syllabus can improve students' learning by allowing them to focus on the most crucial material and draw connections between ideas from other topics (Kaur, 2021; Nusbaum et al., 2021). Additionally, they can help students identify important learning goals and

evaluation criteria, which will improve their performance on exams and assignments (Monaco & Martin, 2007; Parkes & Harris, 2002). As they allow for engagement with the course material and content, visual syllabi can also be useful in fostering student involvement and active learning.

By allowing students to interact with course material and content in a visual syllabus, visualization can aid in stimulating curiosity, metacognition, and critical thinking skills (Avsec & Savec, 2019; Roberts, 2022). Therefore, a syllabus that is created with appropriate visual design and precise organization may be a useful tool for enhancing the learning processes and outcomes (Dinç, 2017). With that, we asked how undergraduates perceive an online syllabus's design and interactivity in an asynchronous course after using the assigned syllabus throughout the course. This study is significant because it sheds light on the advantages and disadvantages of employing visual syllabi in an asynchronous learning environment.

The Role of Syllabus

In a course, the syllabus is regarded as a roadmap (e.g., Abdous & He, 2008; Kaur, 2021; Martin et al., 2018; Saville et al., 2010). A syllabus lists topics, learning objectives, assignments, assessments, and the expectations of the instructor. A syllabus is a structured manual for understanding how and what needs to be done to be successful in a course (Monaco & Martin, 2007; Slattery & Carlson, 2005). It is the first means of communication that has the potential to increase motivation and the relationship between students and the instructor in an online or face-to-face course (Cummings & Jacobs, 2002; Saville et al., 2010; Slattery & Carlson, 2005). A syllabus serves as a form of communication and a reference tool for any course-related questions (Cullen & Harris, 2009; Ekachai & Kim, 2019).

No matter if the course is online or in-person, a syllabus has three key significances. First, it establishes clear expectations for the course. The expectations could include what will be learned, what assignments will be given, how those assignments will be assessed, and what behaviors are anticipated (Fuentes et al., 2021; Parkes & Harris, 2002). Having clear expectations and upholding them aid students in understanding what is expected of them, which can help reduce anxiety and remove uncertainty in the course (Hildenbrand et al., 2020; Smith, 2005). Second, a syllabus promotes transparency through the accountability it establishes. Students and instructors can refer to the syllabus to confirm the requirements are followed. The content and assessments can be delivered in accordance with the syllabus, indicating the course's fairness (Faranda & Clarke III, 2004; Parkes et al., 2003). Third, a syllabus encourages engagement and learning. A relevant, informative, and student-centered syllabus may entice and motivate students to engage with the course syllabus and content (Canada, 2013; Eberly et al., 2001; Ekachai & Kim, 2019), resulting in the intended learning outcomes. Particularly in asynchronous courses, in which participants have more control over their learning (Ismailov & Chiu, 2022; Kaur & Sidhu, 2010), a well-designed syllabus can be used as a tool to manage time and workload (Barth, 2020).

Conceptual Framework: Design and Interactivity in an Online Syllabus

The conceptual framework was grounded in design (e.g., Ludy et al., 2016; Richmond et al., 2019) and interactivity (e.g., Kim & Ekachai, 2020) syllabus studies. We considered images, color, infographics, and static charts as design elements, and structures that required students to engage with the syllabus as interactive elements. In our study, interactivity included accordion structures, tab structures, interactive charts, and embedded videos.

In a syllabus, the use of colors, images, static charts, and infographics is important for improving its efficacy. These design elements offer an effective way to present information and pique interest in the subject (Biktimirov & Nilson, 2003; Macintyre & Hamilton, 2010; Yarosh, 2021). Colors, for example, might be used to highlight significant information or to organize related topics. This can aid students in developing stronger organizational skills and retaining information (Ludy et al., 2016; Yarosh, 2021). Additionally, the use of color can improve the syllabus's aesthetic appeal and make it more interesting to read (Kaur, 2021). Images, static charts, and infographics can be used to visually express challenging concepts in an approachable way that makes them more accessible to learners (Harrington & Gabert-Quillen, 2015; Johnson, 2022; Womack, 2017). They can also break up large blocks of text, making the syllabus visually appealing and easy-to-navigate.

In an online syllabus, interactivity can appear in a variety of ways, including accordion layouts, tab structures, interactive charts, and embedded videos. These interactive components present a unique chance to engage students in the learning process and produce a more engaging educational environment. A syllabus's layout can be improved by incorporating interaction through structural approaches, such as the use of accordion structures and tab structures (Kim & Ekachai, 2020). Students can more easily acquire the knowledge they need and experience less cognitive overload by giving them the option to collapse and extend content portions through the structure of the syllabus content (de León, 2016; Slattery & Carlson, 2005). Another effective technique that can boost student engagement and comprehension is interactive charts. Students who can analyze data using interactive charts have greater comprehension and better retention of complex concepts (Essa & Ayad, 2012). Further, using embedded videos can give students a rich multimedia experience that can improve their learning and motivate them (Simpson & Bolduc-Simpson, 2018).

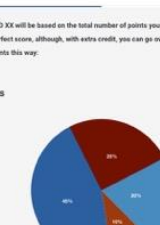
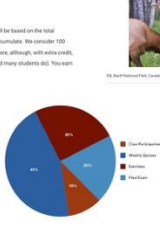
Method

Participants and Setting

This multiple case study investigates five participants' perspectives on the use of visual online syllabi in an online asynchronous geoscience course that focuses on U.S. National Parks. The participants are from a university in the northeastern United States. The usefulness of visual online syllabi in assisting these participants' learning experiences was investigated, as well as their preferences for using such syllabi. There were six sections in the course. Each section followed a syllabus, customized for them. The content of the

syllabi was the same, but there were variations in the design and interactivity. There was no interviewee from one section, thus we focused on one case from each of the other five sections. Course content was on Canvas for all sections. For the location of the syllabus in each section, Canvas, Rise, and Drupal were used. Canvas is a learning management system, while Rise and Drupal are content management systems. See Table 1 for the varying syllabi in the sections, their unique features, and participants' information.

Table 1. Information about the Participants and the Syllabi

Participants (Pseudonyms)	Age	Race/ethnicity	Sex	Syllabus	information for the syllabus used
Mary	20	Asian	Female	<p>Assignment Details</p> <p>Your grade in GEO XX will be based on the total number of points you accumulate. We consider 100 points to be a perfect score, although, with extra credit, you can go over that (and many students do). You earn points this way:</p> <p>Class Participation Surveys (StudentsSpeak?) (10 points)</p> <p>There are twelve surveys. You get one point for each survey you complete up to a maximum of 10 points. (So, if you complete 9 surveys you get 9 points, completing 10 surveys gets you 10 points, but completing 11 or 12 surveys gets you only 10 points—we let you skip 2 of the 12 surveys if you wish.)</p> <p>Surveys are a useful tool for getting feedback from you about the main class presented each week. I will integrate what I learn from them each week into my weekly posts. Please take these surveys seriously and contribute to them meaningfully.</p> <p>Weekly Quizzes (45 points)</p> <p>There are 12 quizzes, one each for unit 1 through unit 12. (You also have to take a "quiz" for unit 0 to prove that your computer can read everything we supply and that you know what is expected of you and of us, but no points for that one.) Each quiz is worth up to 4.5 points. If you get all the questions right on a quiz, you get 4.5 points. If you get half of the questions right on a quiz, you get half of those 4.5 points, or 2.25 points (1 + 1/2 = 1.5). If you get 85% of the questions right, you get 3.8 points (0.5 + 3.3 = 3.8). Thus, to make your life easier, we take your top highest scores and add them together, so you can get up to 45 points from quizzes. You are welcome to take all 12 quizzes, and we'll count the 10 highest. Or, you can choose to skip 2 of the quizzes, but we suggest taking all of them just in case you catch the flu or run into technical difficulties along the way and want to use that week for your dropped grade.</p> <p>Exercises (25 points)</p> <p>There are six exercises. The first exercise goes with the first two units, the next exercise goes with the next two units, and so on. Each exercise is worth 5 points. Like the quizzes, if you get 100% on your exercise, you will receive 5 points, a grade of 50% gives you 2.5 points and a grade of 85% gives you 4.25 points and so on. We add up the points from your 7 highest exercises, so you can earn up to 25 points. We encourage you to try all 6 exercises; the material on an exercise is considered part of the class and may appear on the final or on quizzes after an exercise is completed. If you skip an exercise, you will get 0 points for it, but if you get all the points on the other 5 exercises, you'll still get the full 25 points for exercises.</p>	text only/no design no interactivity syllabus in Rise
Cate	21	Caucasian	Female	<p>Assignments and grading</p> <p>Your grade in GEO XX will be based on the total number of points you accumulate. We consider 100 points to be a perfect score, although, with extra credit, you can go over that (and many students do). You earn points this way:</p> <p>Assignments</p>  <p>Class Participation Surveys (StudentsSpeak) - 10 points</p> <p>Weekly Quizzes - 45 points</p> <p>Exercises - 25 points</p>	text only/no design with interactivity syllabus in Rise
Charles	18	Caucasian	Male	<p>Assignments</p> <p>Your grade in GEO XX will be based on the total number of points you accumulate. We consider 100 points to be a perfect score, although, with extra credit, you can go over that (and many students do). You earn points this way:</p>  <p>Class Participation Surveys (StudentsSpeak) - 10 points</p> <p>There are twelve surveys. You get one point for each survey you complete up to a maximum of 10 points. (So, if you complete 9 surveys you get 9 points, completing 10 surveys gets you 10 points, but completing 11 or 12 surveys gets you only 10 points—we let you skip 2 of the 12 surveys if you wish.)</p> <p>Surveys are a useful tool for getting feedback from you about the main class presented each week. I will integrate what I learn from them each week into my weekly posts. Please take these surveys seriously and contribute to them meaningfully.</p>	design included no interactivity syllabus in Rise

Bob	19	Caucasian	Male	<p>Assignments details, grading, extra credit, and grading policies</p> <p>Your grade in GEO XX will be based on the total number of points you accumulate. We consider 100 points to be a perfect score, although, with extra credit, you can go over that (and many students do). You earn points this way:</p> <ul style="list-style-type: none"> • Class Participation Surveys: 10% • Weekly Quizzes: 45% • Exercises: 20% • Final Exam: 20% <p>Assignment Explanations</p> <ul style="list-style-type: none"> ▶ Class Participation Surveys (StudentsSpeak) ▶ Weekly Quizzes (RockOn) ▶ Exercises ▶ Comprehensive Final Exam <p>Note: On quizzes, exercises, or other things handed in, please check your answers before you submit them electronically. Materials submitted online are graded in the same way as any other course submissions—we grade what you submit. If the answer is D but you chose C, the answer is wrong, whether you accidentally wrote C by hand, or you accidentally clicked on the C circle on the scantron sheet with your #2 pencil, or you accidentally clicked on C with your</p>	text only/no design with interactivity syllabus in Canvas
Frank	21	Caucasian	Male	<p>Assignments and Grading</p> <p>Your grade in GEO XX will be based on the total number of points you accumulate. We consider 100 points to be a perfect score, although, with extra credit, you can go over that (and many students do). You earn points this way:</p> <p>Class Participation Surveys ("StudentsSpeak") (10 points)</p> <p>There are twelve surveys. You get one point for each survey you complete up to a maximum of 10 points. (ie, if you complete 8 surveys you get 8 points; completing 10 surveys gets you 10 points, but completing 11 or 12 surveys gets you only 10 points—we let you skip 2 of the 12 surveys if you wish.)</p> <p>Surveys are a useful tool for getting feedback from you about the main ideas presented each week. I will integrate what I learn from them each week into my weekly posts. Please take these surveys seriously and contribute to them meaningfully.</p> <p>Weekly Quizzes ("RockOn") (45 points)</p> <p>There are 12 quizzes, one each for units 1 through unit 12. (You also have to take a "quiz" for unit 0 to prove that your computer can find everything we supply and that you know what is expected of you and of us, but no points for that one.) Each quiz is worth up to 4.5 points. If you get all the questions right on a quiz, you get 4.5 points. If you get half of the questions right on a quiz, you get half of those 4.5 points, or 2.25 points (1/2 * 4.5 = 2.25). If you get 80% of the questions right, you get 3.6 points (80% * 4.5 = 3.6). Then to make your life easier, we take your ten highest scores and add them together, so you can get up to 45 points from quizzes. You are welcome to take all 12 quizzes, and we'll count the 10 highest. Or, you can choose to skip 2 of the quizzes, but we suggest taking all of them just in case you catch the flu or run into technical difficulties along the way and want to use that week for your dropped grade.</p> <p>Exercises (25 points)</p> <p>There are six exercises. The first exercise goes with the first two units, the next exercise goes with the next two units, and so on. Each exercise is worth 5 points. Like the quizzes, if you get 100% on your exercise, you will receive 5 points, a grade of 50% gives you 2.5 points and a grade of 80% gives you 4.25 points and so on. We add up the points from your 5 highest exercises, so you can earn up to 25 points. We encourage you to try all 6 exercises; the material on an exercise is considered part of the class and may appear on the final or on quizzes after an exercise is completed. If you skip an exercise, you will get 0 points for it, but if you get all the points on the other 5 exercises, you'll still get the full 25 points for exercises.</p> <p>Due dates are posted on our course calendar. Penn State General Education requires active learning in all courses, so this is your chance!</p> <p>Comprehensive Final Exam (20 points)</p> <p>The best way to do well on this exam is to stay current with all the material, and to carefully review the feedback I provide in the weekly unit quizzes. The final exam will be similar to the quizzes, but will not repeat exactly the same questions as the quizzes.</p>	text only/no design no interactivity syllabus in Drupal

Data Collection

To collect data, individual semi-structured post-interviews were conducted. Five individual semi-structured post-interviews were conducted with students who had completed the course, with an average interview time of 17 minutes and 37 seconds. During these interviews, participants were asked a range of questions related to their use of the syllabus throughout the course, their perceptions about the significance of the syllabus, and their thoughts on the design and format of the syllabus. The data collection helped us understand students' perceptions of the syllabus. By utilizing interviews, we were able to gather rich and diverse data that provided insight into students' preferences towards the syllabus.

Data Analysis

We undertook thematic analysis (Alhojailan, 2012; Miles & Huberman, 1994); data reduction, data display, and conclusion drawing. We developed a coding scheme that was grounded in our conceptual framework. The coding scheme considered various aspects of the syllabus, such as its design, interactivity, and role, the relationship between student and teacher as depicted in the syllabus, responsibilities and expectations outlined in the syllabus, the efficiency of the assigned syllabus, and interesting aspects of the syllabus. We conducted a thorough data coding process using our coding scheme and engaged in multiple discussions. Through this process, we reduced the data according to our coding scheme (i.e., data reduction). The thematic analysis

process involved identifying and analyzing the overarching themes that emerged from the coded data. We employed an iterative process of reviewing and refining our three themes to ensure that they accurately represented the data.

Findings and Discussion

Theme 1. Design and Interactivity Motivate Students to Engage with Course Syllabus

This study suggests that including design and interactive components in a syllabus can affect student motivation. This finding coincides with previous studies indicating that a rich multimedia experience can motivate students (e.g., Simpson & Bolduc-Simpson, 2018). Furthermore, it adds to the existing literature regarding the impact of design and interactivity in increasing motivation and engagement. This is in addition to the importance of having a relevant and informative syllabus, which has also been shown to increase motivation to engage with course syllabus and content (Canada, 2013; Eberly et al., 2001; Ekachai & Kim, 2019). Participants Bob and Frank both stated a preference for well-organized and aesthetically pleasing syllabi. The syllabus's chunked structure made it simpler for Bob to navigate and access specific information, which he found to be helpful. Frank indicated that he would want to see more entertaining and intriguing graphics to keep him interested in the course syllabus. These imply that syllabi that are both interactive and visually appealing can have a favorable effect on student engagement. A syllabus can be made more interesting and effective by including design and interactive components, such as infographics, images, and expandable tabs. This will keep students interested in the syllabus and motivated throughout the course.

Bob: I probably like a chunked-up setup because it kind of... like if I want, wanted to come and just look at how much the quizzes were worth in the grade book it'll be, it'll be easy because you'd just click right on grading and then find it.

Frank: That's one thing I will say is it did feel a bit lacking and in that like side because I usually like to have a little fun infographics and all this other stuff around on syllabus and just stuff to make it in general more entertaining. And, and I feel like with a geology type a course like you can kind of have a lot of leeway with that type of thing. You can have a lot of fantastic photos and pictures displayed throughout the syllabus or something to keep that, a little tension there. Or maybe something that you won't hate looking at for a couple of weeks.

Theme 2. Interactivity Embedded Within the Syllabus, In the Form of Tabs to Organize Syllabus Content, Stood Out as Easy to Use for Searching Information and Breaking Down Content

A promising strategy for aiding the search and retrieval of course information is the incorporation of interactivity inside the syllabus through the use of tabs to organize syllabus content. This relates to the existing research, indicating that interactive nature can decrease the cognitive load by allowing expanding or collapsing of the content given to them (e.g., de León, 2016; Slattery & Carlson, 2005). Positive feedback from student

interviews, like the one with Cate, serves as evidence of this strategy's efficacy. She stressed the benefit of the format by pointing out how it improved the organization and use of the syllabus. As Cate stated, the usage of tabs made it simple for her to explore the syllabus and find certain information, such as the necessary course materials. This emphasizes how valuable it is to include interactive elements in the course design in order to improve students' access to and utilization of information resources. Additionally, by encouraging students to interact fully with the course syllabus, the inclusion of such interactive features may enhance student engagement.

Interviewer: What do you think are the advantages of the format that you used [Section 2 syllabus]?

Cate: I mean, as I said, I do think it [Section 2 syllabus] is more organized in a way because instead of like scrolling and looking for the section that you need to find, like if I'm, because I have it pulled up right now, like if I'm like, "Oh, what materials do I need for the course?" I just click on that tab. As opposed to having to like skim through the entire thing.

Mary was shown other types of syllabi during her interview. She used a conventional, all-text syllabus with no design or interactive elements in the course. She did, however, say that she preferred syllabi with interactive elements.

Mary: I was just going to say, I really like the first one you showed to me, which is more of just the breakdown. I think the text only, break down, the one that you used with the interactivity. ... I did like the breakdown where everything kinda flowed into each other.

Theme 3. Online Syllabi with Design Included Were Found to Be Easy for Students to Read; However, Syllabi with Design but No Interactivity Were Criticized for Causing Students to Scroll Excessively

Students indicated that integrated online syllabi were simple to read when the design was included. Participants specifically praised the order and clarity of sections, including the provision of key information such as due dates and success criteria. Included design elements were thought to be beneficial in encouraging a thorough comprehension of the course requirements and expectations. The design-related finding can be associated with presenting information in a more accessible way, as visualization has a role in making the content more accessible to all learners (Harrington & Gabert-Quillen, 2015; Johnson, 2022; Womack, 2017). Mary claims that syllabi with design can stop them from being delivered in a difficult-to-read manner.

Interviewer: How important would you say looking pretty is, or that visual appeal?

Mary: I think it's important in the sense of it [a syllabus] would have me coming back to it because I think that if I knew that the syllabus was clunky and kind of hard to look at, I would be like, "Oh, I don't really want to come back to it."

It was also noted that courses that have design but no interactivity were criticized for requiring too much scrolling. Charles complained that having to read through lengthy portions made it difficult to find the important information. According to this finding, interactivity is just as important as design in supporting readability and facilitating ease of use and navigation.

Charles: My favorite parts [of Section 3 syllabus] were just the, how the sections were really, they were very, it was just very easy to read. You have your Keys to Success and the due dates, which I liked. And probably my least favorite part was, I don't know, it was just like a lot to go through, just the way it was laid out. You had to do a lot of scrolling. And it was just, it was a very long syllabus.

Conclusion

The use of visual aids is even more crucial in an online setting where students are more likely to get disinterested or easily distracted. The use of images, infographics, and interactive elements can assist in holding students' attention and keep them motivated throughout the course. When creating course materials, instructors should take their students' preferences into account. Teachers can encourage students to feel more invested in the course and improve their overall learning experience by developing well-organized, attractive syllabi.

The results show that using tabs to group syllabus content is a highly effective strategy for enhancing the usability of syllabus documents, in general. By minimizing the time and effort needed to find pertinent material, this strategy can improve the user experience and raise satisfaction levels for the syllabus as a whole. As a result, to enhance their students' learning, teachers should think about introducing interactivity, such as tabs, into their syllabi. Our findings highlight the need for creating online syllabi that balance aesthetic appeal and practical utility. Instructors can improve the reading experiences of their students and foster better engagement with the course syllabus by incorporating both interactive and design elements into their syllabi. Considering that our design and interactive elements are designed accessibly, it is important to conduct further research to fully understand how all learners—including those who require official disability accommodations—receive and use these elements.

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Exploring the Community Building Process of Yellow Economy in Hong Kong: A Perspective from Social Value Co-Created Political Consumerism

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Abstract: Over the past 20 years, more and more social movements have emerged around the world. What followed was a shift in consumer values. In 2019, Hong Kong people launched the anti-ELAB movement, a lot of demonstrations and protests appeared in Hong Kong. Moreover, Hong Kong people used their purchasing power to carry out "protest", through boycotting pro-China and pro-government stores (also known as Blue shop), and boycotting the stores which support the anti-ELAB movement and Hong Kong's democracy (also known as Yellow shop). These political consumers form communities because of the shared values, and they share information and propose consumption movement in the communities. As political consumption became more and more common in recent years, many research papers emerged. However, limited research has been made on the process between political customers, the different stakeholders involved in the consumption process, and the extended community of political consumers. To this end, this research aims to explore how political consumers and different stakeholders in the consumption process build a community by co-creating social value. Based on the secondary data and the timeline of the Yellow Economy, this research uses and modifies Wenger's framework to provide a new version of Yellow Economy community. However, there are some details that have not discussed in this paper.

Keywords: Political Consumerism, Community Building, Yellow Economy, Hong Kong

Citation: Tseung, C., (2023). Exploring the Community Building Process of Yellow Economy in Hong Kong: A Perspective from Social Value Co-Created Political Consumerism. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 243-254), Denver, CO, USA. ISTES Organization.

Introduction

Nowadays, be it the domestic enterprise or the international market, consumers are beginning to attach importance to the political stance and position of enterprises. In recent three decades, there has been a dramatic proliferation of study attempts to validate the political consumption theories. The concept of political consumption achieves in common consumption pattern, such as green trade and fair trade, but under the current environmental background, this situation is becoming more and more intense all around the world. This consumption behavior combining political stance and customers' value called "Political Consumerism". In

previous ten years, with increased social global movement appear, more and more customers pay attention to the political stance and action of different brands. Many international brands have caused extreme situations on various political issues.

Background of Political Consumerism in Hong Kong

The Anti-Extradition Law Amendment Bill Movement took place in Hong Kong in 2019. This protest began because of the legislation of Fugitive Offenders and Mutual Legal Assistance in Criminal Matters Legislation (Amendment) Bill 2019 (in Chinese: 2019年逃犯及刑事事宜相互法律協助法例 (修訂) 條例草案). The Hong Kong Government proposed the bill in order to solve the law omission between Hong Kong, China, Macau, Taiwan, and other countries. The Hong Kong Government hoped this bill would solve the problem arising from the murder case of Poon Hiu-wing. However, some regulations in the Fugitive Offenders and Mutual Legal Assistance in Criminal Matters Legislation (Amendment) Bill 2019 (as FO Amendment in the following) left significant concerns in Hong Kong society. Hong Kong people were worried that the FO Amendment would destroy the “One Country, two systems” of Hong Kong. Therefore, a series of protest began.

During the beginning of the Anti-ELAB Movement, different stores showed their attitude of supporting protest march, they provided free water and materials to the protesters. Some stores even provided place for the protesters to hide when the police officers used tear gas. After that, Hong Kongers used “Yellow” to describe the shops shared the same political value, on the other hand, used “Blue” as the opposite value.

Research Objectives

One of the research aims is to identify a clear picture of the development path of the Yellow Economy in Hong Kong. Using the community-building process as the background, the research targets to provide a community-building framework for the political and social value-driven consumption community. The research objectives of this research paper are as follows:

1. To understand the awakening reason and development path of Hong Kong's political consumption pattern
2. To identify the community-building process of the yellow economy in Hong Kong from a social value co-created political consumerism perspective
3. To provide a community-building framework driven by social value co-creation based on the political consumerism

Literature Review

Political Consumerism

Political consumerism is not a new term in recent years. More and more researchers pay attention to this term

because of the increasing concern about political issues. In definition, political consumerism represents consumers taking ethical, social, and political values into their consumption behaviors, (Klintman, 2006, Mads P. Sørensen, 2004, Li & Whitworth, 2022, Shah et al., 2007, Hannes Rask, 2005, Mette Tobiasen, 2005, Kristin Strømsnes, 2005) such as shopping, investment decision and even personal banking decision (Klintman, 2006). Political consumers will select the ‘proper’ product producers and sellers when considering buying a new product (Mads P. Sørensen, 2004). They will take brands’ actions into account to see whether the brands fulfill the ‘requirements’ as ethical. Hence, consumers take non-economic values into their consumption consideration and establish a linkage between companies and themselves.

There are two ways of political consumerism: boycott (negative consumerism) and buycott (positive consumerism) (Klintman, 2006, Mads P. Sørensen, 2004, Li & Whitworth, 2022, Shah et al., 2007, Hannes Rask, 2005, Mette Tobiasen, 2005, Kristin Strømsnes, 2005). Consumers will withdraw to buy any products from the specific brand which holds the opposite opinion as a punishment.

On the other hand, consumers will prefer to buy the products from a brand that shared the same value as the support. Some brands which support some ethical and social issues as Nike, Body Shop, Oxfam, Ben & Jerry's Ice Cream (Boström M, et al, 2005) earn a good reputation within the specific political consumerism group. Similar examples abound in the readings.

Up to this point, however, there were little research has been done on the formation of a consumption community, those consumption groups such as fair trade or green trade are only used as examples to explain the concept of political consumerism. One of the goals of this research is to show the community development process of a political value-driven consumption community, to establish a direct relationship between political consumerism and community.

Value Co-Creation

The term ‘value co-creation’ was firstly appeared in 1996, and it was promoted by Prahalad and Ramaswamy (Agrawal, Kaushik, & Rahman, 2015). Value co-creation in definition represents an interactive and social process between different stakeholders in order to provide and create a shared value (Roser et al., 2013 p.23). It is a personalized experience between suppliers and customers (Prahalad and Ramaswamy, 2000; 2004).

The co-creation process not only is a co-production process but also a process of co-creating customers expected to experience (Prahalad & Ramaswamy, 2004). During the process, suppliers create the value propositions and customers confirm or recreate the value when they consume (Payne et al., 2008 p.84). In the service dominant (SD) logic, supplier is the value providing and customer is the role of undergoing value co-creation (Vargo and Lusch, 2004; 2007). The supplier or company needs to adjust its position when it knows more about the customer.

When most of the discussion mainly showed that the value co-creation takes place within customer and supplier, some studies offered that the value co-creation also involve other possible stakeholders (Agrawal, Kaushik, & Rahman, 2015; Cannas, Argiolas, & Cabiddu, 2018). Hence in recent understanding of value co-creation, it is a collective process implemented by various stakeholders (Porter & Kramer, 2011) to achieve the same goals (Laamanen & Skålen, 2015).

Community Building

The term “community building” is usually interchanged with “community development” (Bullen, 2007; Chavis, 2000). Community building by definition means a way of problem-solving in neighborhoods or rural regions (Joseph McNeely, 1999). During the community-building process, neighborhoods learn from each other to achieve the same goals while creating human power, social capital, and other resources. Some people see community building as a series of activities to improve members’ social abilities (Paul W. Mattessich, 2009).

Community building is different from typical poverty alleviation. The goal of community building is to build self-reliance, independence, self-confidence, and a responsible community (Joseph McNeely, 1999). It highly depends on well-established shared values within the community. Community building normally applies to solving social problems including violence, poverty, drug addiction, health issue or social justice, human right, and others.

Method

Digital Ethnography

With the improving technology, a new term “digital ethnography” appears. Digital ethnography is a contemporary form of ethnography in terms of considering online social space. Digital ethnography is applied in various fields, including business, education, health care, tourism, and more (Delli Paoli & D’Auria, 2021) The research method of digital ethnography is similar to ethnography, but the research subject is based on online communities, groups, and people. This research contains digital ethnography to understand the development path of the Yellow Economy in Hong Kong. The digital ethnography mainly studies the discussion on LIHKG (a Hong Kong local online discussion platform) which cultivates the idea of Yellow Economy. Since digital ethnography would not take the characteristic of the medium or social platform into account, it only looks at the cultural, social, experience, and value established in the online public space (Delli Paoli & D’Auria, 2021), it can work on studying chatrooms, discussion groups, discussion forums, or observing virtual realities (Allen, 2017).

In-Depth Interview

The interview is one of the most popular and frequently used research methods of data collection. The interview

is one of the quantitative research methods, it can apply in business, social science, health care, and more fields. The interview contains different forms, such as individual, group, face-to-face, telephone, or online. This research adapts semi-structured interviews, in which the researcher can respond to the response of interviewees to generate and develop the issues that the interviewees mentioned (Stuart MacDonald & Nicola Headlam, n.d.). Using semi-structured interviews, several types of information can be collected, such as the motivations of the Yellow Economy and the building up process of the Yellow Economy Community.

Case Study

The case study method is a common and popular research method that is used in psychology, sociology, political science, social work, business, and more. The reason for using a case study is to understand complex social phenomena (Yin, 2003). The case study method undergoes data collection at one or several sites for a period. In the Yellow Economy, the community-building process is unclear and complicated. Hence, this research uses a case study to understand the internal communication between different stakeholders, and to discover the community-building process and conflicts that happened within the Yellow Economy Community.

Data Collection Source

To understand the trend of Hong Kong's political consumption pattern, I use LIHKG, a Hong Kong local online discussion forum to collect the number of posts about the Yellow Economy from 2019 to 2022. LIHKG is a Hong Kong local online discussion forum established in 2016. It is one of the well-known local discussion forums in Hong Kong. It gets more and more popular during the Anti-ELAB movement. It is the main platform to organize different social movements and events. Also, it is the first public space that produces the concept of 'Yellow Shop' and 'Yellow Economy/Yellow Economic Circle'. Three criteria control the data collection process which are Posts that have over 20 comments, discussion time is from 2019 to 2022, and using Two searching keywords: 'Yellow Shop (黃店)', 'Yellow Economy(黃色經濟圈)'.

Results

Development Path of Yellow Economy in Hong Kong

The discussion of the Yellow Economy started in 2019. It achieved the highest discussion in 2020 with nearly 200 posts a year. After that, the discussion dropped dramatically four times in 2021. In 2022, less than 50 posts were captured. Hence, we can observe that the social discussion of the Yellow Economy is gradually decreasing. From Figure 2, a clearer development trend was shown.

In Figure 2, the discussion of the Yellow Economy keeps increasing in 2019. However, the discussion drops in early 2020 to 23 posts in Jan. After that, people started to talk about Yellow Economy unstably until Sep 2020.

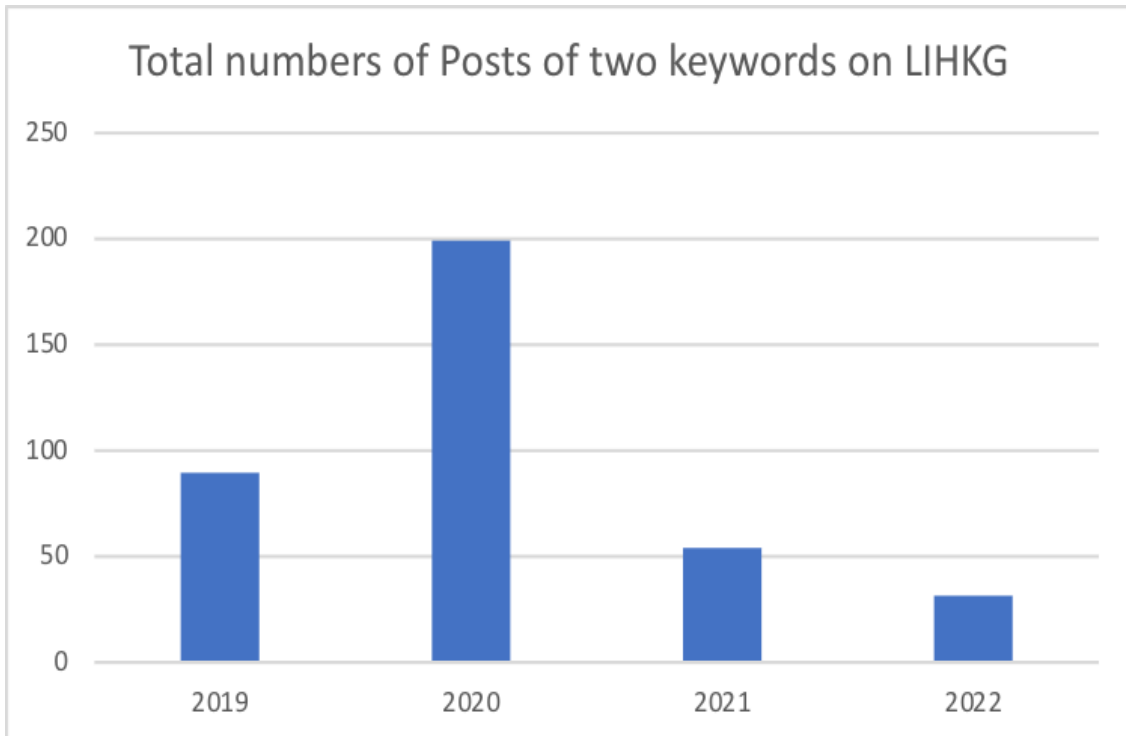


Figure 1 Total Numbers of Posts of Two Keywords on LIHKG

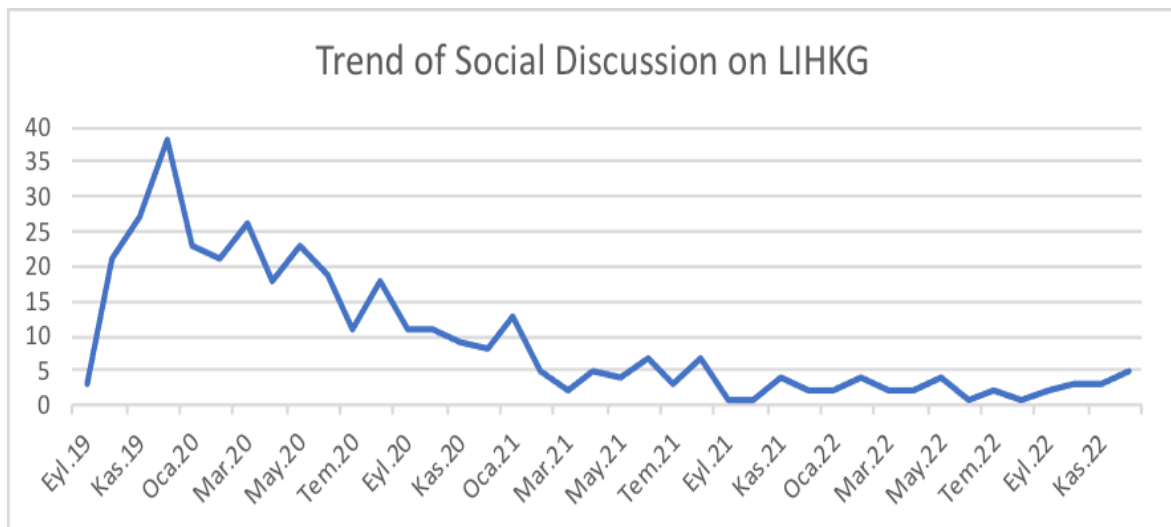


Figure 2 Trend of Social Discussion on LIHKG

The social discussion entered another downward from Sep 2020 to Dec 2020, with the lowest number of discussions reaching less than 10 posts a month. More people discussed the Yellow economy and Yellow shop at the beginning of 2021, but the following kept gloomily developed until the end of 2022.

If two keywords are separated, another trend can be observed as Figure 3 shown.

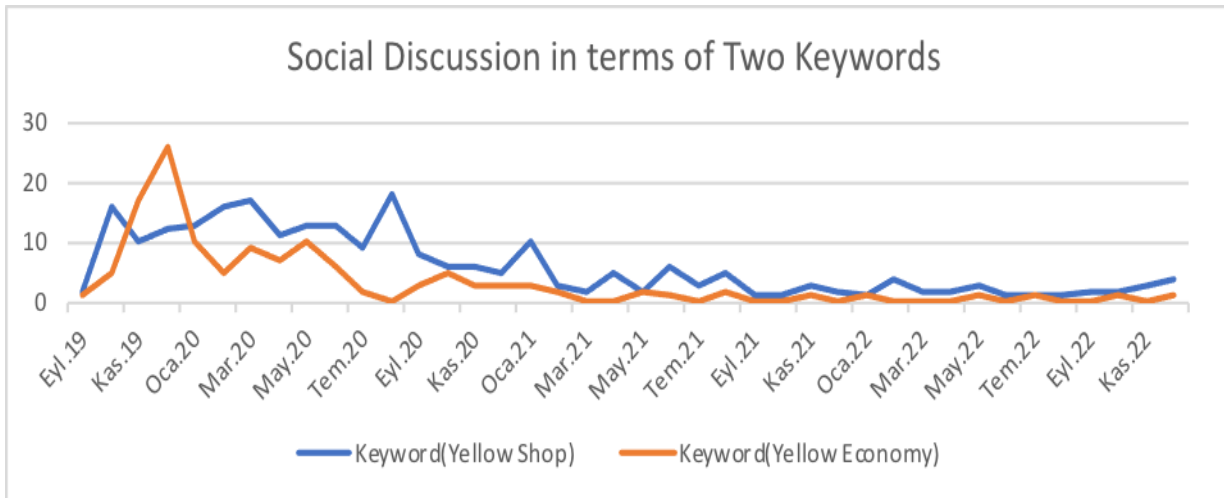


Figure 3 Social Discussion in Terms of Two Keywords

In Figure 3, the social discussion of Yellow Shop and Yellow Economy have different development timelines. For Yellow Economy, its climax happened between the end of 2019 and the beginning of 2020. What's follow was a long-term downward development until the end of 2022. On the other hand, the social discussion of Yellow Shop has a greater change in the overall development timeline. The discussion of Yellow Shop arrived at the first climax in Oct 2019 and had around 18 posts.

After that, the number dropped to 10 posts one month later. However, the discussion gradually increased and reached the second climax around 13 in Mar 2020. The third climax happened in Aug 2020, the number of posts had nearly 20 which was the highest number of posts in the overall timeline. However, it is still less than that of Yellow Economy which has the highest number of over 25 posts in one month. After Sep 2020, the discussion went silent and unstable until the end of 2022.

The discussion of Yellow Economy and Yellow Shop shows a huge difference between 2019 and 2020. In 2021, the heat of both started to go negatively and this phenomenon kept happening until the recent year.

The Community Building Process of Yellow Economy in Hong Kong

Trend of Online Community Building

When the concept of the Yellow Economy grows in Hong Kong, some people build up online communities on various platforms. To understand the trend of the community-building process, I collected the number of operating FB groups and FB pages as the data source. Moreover, I hope to observe the relationship between social discussion and online community building.

In this research, only online communities built on Facebook are collected. It is because other online communities, such as IG, Telegram, etc are hard to discover and record.

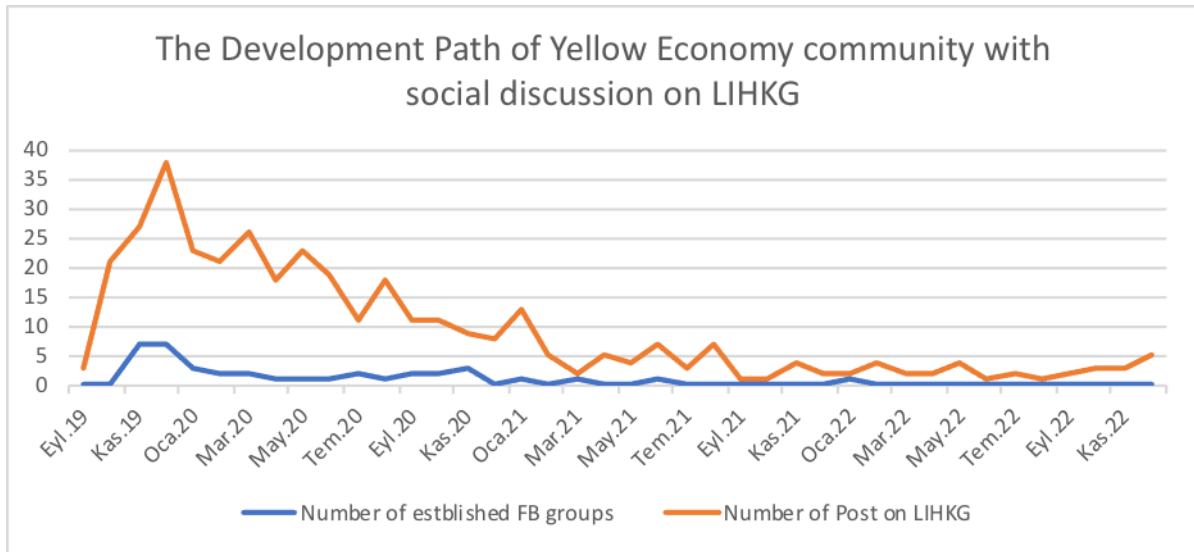


Figure 4 The Development Path of Yellow Economy Community with Social Discussion on LIHKG

From Figure 4, the climax of building up the online communities happened at the end of 2019. More than 5 groups were discovered on Facebook. At that moment, the social discussion arrived the climax as well. After that, fewer Facebook communities were built up which is similar to the trend of the social discussion about the Yellow Economy in Hong Kong. Hence, the social discussion may affect the community-building process of the online Yellow Economy community.

Discussion

Typical Community Building Process vs Yellow Economy Community Building Process

To analyze the whole community-building process, Wenger’s framework is used to do a further study based on the finding.

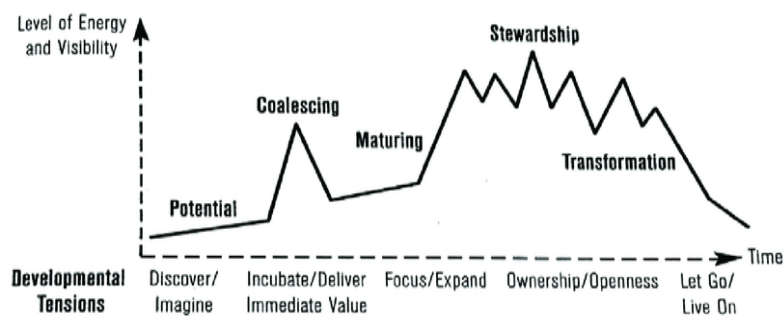


Figure 5 Stages of Community Development (source: Wenger et al., 2002, p. 69).

Wenger provided 5 stages of community development: Potential, Coalescing, Maturing, Stewardship, and Transformation. In the Potential stage, people find out the problem or potential unsolved problem. They then form different groups with shared values and goals. After they gathered, they started to learn from each other

and expand the community which lead them to Maturing stage. When the community gets larger, internal problems may occur. Thus, a leader or an organizing group of the community might help to solve the internal problems in the Stewardship stage. Moreover, they might help to foster internal information exchange and communication. When the shared problems are solved, the community enters the Transformation stage, some members may leave the community or the community may continue with another shared value formed by the remaining members.

This study learned from Wenger’s framework and develop a new community-building process based on the Yellow Economy Community. The new framework provided 5 stages of Yellow Economy community development: Incubation, Explosion, Infighting, Adaptation, and Transformation.

Yellow Economy Community Building Process

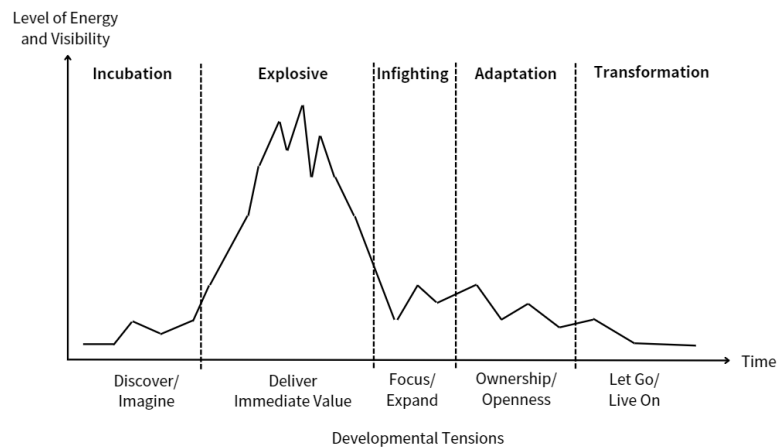


Figure 6 Yellow Economy Community Building Process

Stage 1: Incubation Period

Before the born of the Yellow Economy community, the anger of Hong Kongers accumulated over several years. In 2012, Hong Kong people carried out a protest against setting up the course of ‘Moral and civic education’ in primary and secondary schools. Hong Kong people thought this course is controversial as it might ‘brainwash’ students’ attitudes toward the Chinese government. Therefore, more than 90,000 people joined the protest to show their stand. Finally, the course was on hold.

In 2014, Umbrella Revolution occurred. The movement stands for 2.5 months in total, and over 1.2 million people participated in this social movement. The main goal of this movement was to earn the ‘real’ election of the Hong Kong Chief Executive. In another word, Hong Kong people want to achieve ‘one person, one vote’ as Hong Kong people cannot elect their chief executive directly. Hence, people want the Hong Kong government to implement the ‘real’ election since it is the promised policy which is written in the Basic Law(基本法).

As a result, the shared value is formed over a long time through various social movements and anger. In stage 1 (Incubation), the level of energy and visibility change over time because of different social movements. People with the same goals come together and wait for a change to push them to come above the water which is the Anti-ELAB movement in 2019.

In 2019, over 2 million people walked on the street and fight for their rights and demands. The social movement triggers the conflict between the Hong Kong government and citizens. Because of the police officers' brutality and the government's misconduct, the anger gradually became a political force and cultivated the social movement. Hence, the community started the form its shape as people shared the same political goals and political actions. The development of the Yellow Economy community entered stage 2.

Stage 2: Explosive Period

During the Explosive Period, people gathered in various places and social media platforms, including Telegram, Whatsapp, LIHKG, and more. Most people use online discussion platforms to share and give suggestions about the community of the Yellow Economy. Hence the energy and visibility in this stage are the highest. People posted their views and constructed a bigger and shared picture of the future.

Some people with the same point of view thus went together and formed the Yellow Economy community. Some people clarified and listed different shops into two political stands voluntarily: Yellow and Blue. That information and materials then flow to various platforms, such as Instagram, Telegram, LIHKG, and others.

In this stage, people constructed the same political goals and hope for the future. With the online discussion, suggestions and opinions were provided by different members to modify the boundary and definition of the community. Questions and doubt have existed in this stage, however, is less than the trust and belief of the members.

Stage 3: Infighting Period

In the Infighting period, the community expanded to different industries and becomes standardized. However, community members started to ask questions and judged various Yellow shops as known as Dau Wong (鬥黃). Yellow shops and community followers started to compare the level of participation of Yellow shops in the social movement. They further pointed out different levels of Yellow to indicate the level of Yellow shops (Golden, Yellow, Pale Yellow, and Fake Yellow). Therefore, community members began to judge and challenged the political stands each other.

As the result, some community members chose to leave the community as they could not endure the infighting within the community. Therefore, the energy and visibility of the community dropped and entered the

depression period.

Stage 4: Adaptation Period

The community faced a lot of changes in the Adaptation period. With peripheral pressure, such as the policy of the local government, society, or others, Hong Kongers no longer share their political goals and opinions openly. Some of them go underground to support Yellow shops secretly while some of them decide to go back to normal life to prevent committing a crime. During this period, some of the community members tried to call back the aims of the whole community. Hence, the energy and visibility of the community are unstably developed. However, owing to external pressure, the Yellow Economy community entered the second depression period.

Stage 5: Transformation Period

When the Yellow Economy community entered the Transformation period, the shared value of the community changed. When most of the active community members go underground, fewer people would like to share with the community members openly through online or other platforms. Hence, the political consumption action change from political action to daily life activities. The meaning of collective action is unchanged, but the community action shift from collective action to more depends on individual action. Therefore, the collectivity of the community drops as well as the energy and visibility.

Conclusion

This research shows the development timeline of Yellow Economy and the online community group development path. An obvious changing time can be observed in the past few years through this research. Based on the secondary data and the timeline of the Yellow Economy, this research uses and modifies Wenger's framework to provide a new version of the framework base on the research on the Yellow Economy community. However, some details have not been discussed in this paper, such as the motivation of community members, the influencing factors of the community-building process, and others. Moreover, most of the data sources come from a single platform (LIHKG) because of the closure of various social media and News media.

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Exploring Intermediaries Role of Visual Art YouTube Influencer in Thailand from the Perspective of Value Proposition

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Abstract: One of the long standing classic problem of Thailand visual industry is the small size of the audience and market due to the static mindset among Thai's society that only artist can understand art. Creative Economy Agency's visual art industry report emphasize the problem as the one reason behind the small growth of this industry. In recent years visual art industry've welcome the new members – visual art YouTube influencer, who parallels work in social media. Riety and others YouTuber gain their audience base in which exceed the long standing art magazine who has been built the number of follower for long time. Their content somehow different from the traditional art content eg. exhibition review, artist interview to a few names, instead are occupied by the user-generated content (UGC) 's characteristic moving away from contribution to the art industry toward more entertainment oriented. Therefore, we've witnessed the gap between the new breed of content and the pre-existing one and its detaching from the industry. In this study, using the method of literature review, researcher identified the key different between the value of visual art, art content, and user-generated art content. And, through emphasizing the dominant value of each group, the three frameworks generated in this study show the transitional and dynamic of the 5 value domains – intrinsic value, symbolic value, economic value, social value and political value. The frameworks of user-generated art content show the domination of intrinsic value and economic value which is influenced by the nature of user-generated content – tool for user to seek entertainment and manage their emotional, and the platform's provided quantitative data. The user-generated art content framework, then, will be used in the next stage of this research that is the exploring values and intermediaries role of case study – Riety.

Keywords: Value of Art, Art Content, YouTuber, Influencer, Thailand Visual Art Industry.

Citation: Charitbutra, N (2023). Exploring Intermediaries Role of Visual Art YouTube Influencer in Thailand from the Perspective of Value Proposition. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 255-265), Denver, CO, USA. ISTES Organization.

Introduction

The origin of visual art industry in Thailand can be dated back around 40 years ago at 1990s due to the country's economic boom that result in the the expanding of the country's contemporary art activity (Teh, 2017), (Supanakorn & Thimwatbunthong, 2018). In 2003, led by the most prominent Thai curator Prof. Apinan

Poshyananda, Office of Contemporary art and Culture (OCAC) under the Ministry of Culture was established with an aim to support the art and culture activity (Parimethachai, 2022). It was the first time that contemporary art and culture officially categorized into nine domains –visual art, performance, music, poetry, architecture, decorative art, graphic design, film, and costume design (OCAC, 2017).

Visual art industry is one of the 15 creative industries that its economic value has expanding from 1.8 hundred million Baht in 2014 to the 2.3 hundred million Baht in 2018 reflecting the high potential development of this industry. Visual art industry entities are comprised of artist, curator, art agency, art collector, art installer to the art logistic & art handler, in total 69,250 people working in this industry (CEA, 2020). The important of art is not only relate to the economic growth but to the social prosperity as Vipash Purichanont, independent curator and art lecturer at Faculty of Archaeology, Silpakorn University, emphasized that art is the safe area for individual to freely express their opinion toward the of political and social issues that, in the same time, reflect the diversity of the social without causing the conflict (Happening, 2020).

2018 was the significant year for Thailand contemporary art scene as it was the first time in 30 years's Thailand contemporary art legacy that 6 majors, public-scale art event were emerged at the same time including Bangkok Art Biennale, Bangkok Biennial, Ghost2563 – held in the Thailand capital, Thailand Biennale in Krabi, Khon Kaen Manifesto in Khon Kaen, and the Pannale in Chiang Mai. The large-scale event that brought out artwork from the enclosed gallery space to the public space made it easier for general audience to access art (Creative Thailand, 2020). However, solely exhibiting the art to general audience in the public sphere – department stores, parks and countless of the tourist destinations, cannot resolve the fundamental problem because, at the end of the day, Thai's society still perceived art as something extravagance. (Creative Thailand, 2020).

Pawit Mahasarinand, former director of Bangkok Art and Culture Centre point out that the problem in Thailand visual art industry – lacking of audience, is rooted in the static mindset, the idea that only artist can understand the art or in other word only practitioner can understand the work. In the similar way, Chalida Uabumrungjit, the director of Thai Film Archive (public organization) added “art always perceived as extravagance in Thai society. But it's actually, the truth is that art is the basis in everyday life; thus, the question is how to make the art matter in the society” (Happening, 2020).

The government concerns about the problem regarding the lack of art audience as well. In 2020 edition of CEA visual art industry report (published by Creative Economy Agency (public organization), small-size of art audience and market is one of the most crucial obstacles in developing visual art industry. CEA's researcher point out that larger of art audience is the foundation of developing art market in country and in order to achieve the larger art audience based, there's the need to utilize the offline and online media to create the art understanding and increase number of art enthusiasm through providing information about art exhibition to wider group of audience. However, examine closely to the suggestion of implementation plan. There's only the suggestion relate to the public art event in the manner of approach the general audience in public space eg, art fair and market channel (online & offline) (CEA, 2020 page 124).

Undeniable that YouTube start to dominate the way people perceive content. In Thailand, the statistic show that 3.30 hours is the average time Thai people spending on watching YouTube and we have more than 37.3 million Thai's YouTube account which is ranked in 18th position globally.

Another obvious signal came from last years's Thailand Influencer Award 2022, organized by Tellscore. Three of the winners in Art & Design categories are the art student who stop pursuing the traditional career path of being artist or designer, instead they start YouTube channel building the audience base and got the opportunity working with the global brand.

Last year's 1st prize winner *Riety*, Darisa 'Pahn' Karnpoj, art student graduated from Faculty of Decorative Art, Silpakorn University, whose channel features tutorial videos on drawing and painting and historical art content, build her fortune by expanding her portfolio, creating a more diverse artistic and lifestyle content that helps everyday people better understand the meaning and importance of art in the world today. Within three years, beside from working with the Samsung, Shiseido to a few names (Happening, 2019), her channel's follower number exceeded 653K that is more than the number of follower of long-standing art magazine in Thailand (57 K follower, Fine Art Magazine / 99 K follower, art4d Magazine) or even new-generation online art magazine Ground Control (92 K follower)

The above statement shows the detaching between new generation of artist who produce art content that can rapidly engage with the large-sized of audience and the visual art industry which are struggling with problem of small-sized audience and market. The problem statement of this study, thus what're the value of art content produced by the art YouTube influencer an to what extend how and why that value is detached from the industry in which, ultimately, lead to the question regarding the influencer's role as a intermediator.

The Evolution of Value in Art Content.

In order to understand the value of *Riety's* channel and her intermediaries role and to what extend how she channel the value through the art content to stakeholders in Thailand visual art industries , the study; therefore, set the starting point at the exploring how the value of the visual art were changed, added, modified, or amplified by the reproduction and digital technology in the age of mass media until the age of social media.

Value of Classical Visual art

The meaning of 'arts' has been change from time to time. In the middle age its refer to those useful craftsmanship products later, during the Renaissance era, as artist raise their low status of visual art by emphasizing their intellectual and theoretical. Eventually, in 18th century the modern system of arts – painting, sculpture, architecture, poetry, and music, has establish (Walker, 2019).

The word “fine” (in fine art) tightly linked to the *intrinsic value* of aesthetic pleasure – beauty, skillful, elegance without concerning the utilitarian value. In other word, fine art has gained its specific value by contrast with mechanism, applied or useful craft (Walker, 2019).

Scholar Noel Carrol point out that since the intrinsic value of visual art is linked to the audience. Art with the capital A serve no function. They exist to provide pleasure, fear, anxiety, in which we can experience from the avant-garde art; therefore he call intrinsic value a *reception value*. The reception value is the terms that has broader meaning of “undergoing experience that the audience values for nothing other than having of those experience”. This broader term is essential as art, sometime, could provoke somewhat unpleasure experience as well. For example, no one would agree that Goya’s painting or some of the avant-guard painting gives us the ‘pleasure’ (Carrol, 2009).

On the other hand, at the same time, art as an object also put in to service political purpose displaying the power and virtue of the ruling class. For example, to educate the member of christianity and celebrate historic moment. It can be the painting to the sculpture that equipped with the clear intention. (Carrol, 2009) Eventually, looking from the social lens, art in the pre-industry era has the symbolic value due to the patronizing culture (Sacco, Ferilli, & Tavano Blessi, 2014). Art is preserved for the high-class people; therefore, it produces class division in the western society.

In contemporary world, the other aspect on value of art that is the cognitive value has been discussed. The cognitive value of art refers to the ability to arouse pleasurable emotion, entertain, delight and enlighten. Scholar point out that experience of art is so rewarding as it can be the important source of knowledge about ourselves and our relation to each other in the word (Young, 2003). Different from the science, art doesn’t convey the knowledge by the illustrative representation meaning that instead of gaining knowledge by reading the semantic representation, perceiving art provided viewer the visual experience that lead to the reflection of ourselves and the world.

However, from this point, instead of exploring the value of the art, this study focuses on the value of the art content in from its origin – in the dawn of mass media era, to the day it is intertwined by digital technology through the consumer (audience and industry)’s perspectives.

Value of Art Content in the Age of Mass Media & the Rise of Quantitative Proxy

Walter Benjamin, in his book ‘The Work of Art in the Age of Mechanical Reproduction’ (1936) explored the nature of the art’s value by arguing that the value of art is originated from its originality that is based on its presence in time and space. Value or “aura” of art accumulates through its enduring, the change they have suffered in physical condition over the years, and the change of its ownership. All of this allow us to trace back to its originality thus reflect the concept of authenticity.

Therefore, the reproduction technology in 1900s eg. photography, that cause art to be more independent from the reality, result in the liquidity of its Aura that, eventually, shift the pre-existing value of art (authenticity) toward social value – the democratization of culture.

Art Magazine

The twenty century is the time when people experience the daily life mass media spectrum – radio, cinema, etc., (Walker, 2019). However, in terms of art world, the emergence of art content in mass media could be marked in 1960s (Conaty, Kim, 2016). Before that the average life span of magazine in U.S. from 1741 - 1850 was only 18 months (Allen, 2011).

The rising of art magazine is originated from three reasons – the growing market of contemporary art especially in US and Europe due to the movements of Abstract Expressionism, Pop Art, Nouveau Realism and minimal art that lead to the birth of the reader, the resurgence of the cultural intermediaries including art critique, art historian and, art journalist soon after ‘Death of the Author’ by Roland Barthes was publish in 1967, and the maturity of advertising industry that made magazine profitable.

One of the most prominent art magazine in U.S. is the Artforum (1962 - now) The typical art content type of magazine can be categorized following – exhibition review, art historical article contemporary critical text and the artist interview (Conaty, Kim, 2016). At the same, there were the sign of the booming of artist book which published and distribute by the artist.

It is undeniable that art content in this era was created and distribute with an intention to support the industries. Art magazine offered an appealing medium not only for combining text and images but also keeping up the regular publishing pace that support a constantly changing of exhibition (Conaty, Kim, 2016). Once content is in circulation, it could be seen by many more people than standard viewership for gallery and, consequently change the way people perceive art – bridging between the gallery and home and allowing reader to have authority to read at their own pace. Moreover, critic John Walker also emphasized the magazine (and art content’s) power of defining and legitimating new development in art has become more greater than the gallery and museum (Conaty, Kim, 2016).

Art Content: The Dynamic Between Intrinsic and Economic Value

John Berger, renowned English art critic and writer, stated that at the fundamental, writing associate with the experience. (Berger, J.1993).

“Whatever the motives, political or personal, the writing becomes as soon as I begin, the struggle to give the meaning to the experience.” (Berger, J.1993).

Another view from art critique Noel Carroll is that, based on the fact that the artwork contains the receptive value; therefore, the critic task— which involves reasoned evaluation – description, classification, contextualization, interpretation etc., is to enable the audience to realize whatever positively valuable experience (Carroll, 2009). He also gave the example of the critique that fell in line with the aforementioned idea – art writing and the art experience, namely, early critique, Joseph Addison who took it to be his duty to instruct the readers in how to derive such pleasures – the pleasure of the imagination from the artwork (Carroll, 2019).

Michael Findlay, American art critique, writer and director of Acquavella Galleries, points out in his book ‘The Value of the Art (2013)’ that there are evidences that show the change of language (or content) from describing intrinsic feeling writer has on art to the commercial purpose. One of the examples he put in his book is the news about the van Gogh’s Sunflower’s auction at Christie’s in London for 39.9 million in 1987 on the front page of The York Times. He emphasizes that the only reason that makes art newsworthy solely because of the price paid for the art auction. Moreover, this news also signified that, at that time, art became the fit subject for the mass circulation weekly magazine – with its screaming title with the only purpose of drawing attention such as “Is he/she the greatest living painter in US?” (Findlay, M. 2012).

Reproduction of the art in mass media can be seen as the democratization of culture as it can convert pre-existing (high) culture to the every class of people in society. However, due to the nature of mass media that was designed to reach the huge group of audience, thus the success in mass media often measures in quantitative fashion – rating and share (Walker, 2019).

Considering from the power perspective, characteristic of the media landscape during the age of mass media is the concentrated power of the TV producer and film studio, publishing company to a few names who have authority of cultural content gatekeeper. Scholars marked this situation as a culture 2.0, the field of exploration of creativity where the cultural commodities were commercialized by big company (Sacco, Ferilli, & Tavano Blessi, 2014).

Social Media – The New Value of Art Content

Looking back from today, the legacy of concentrated power of publishing, broadcasting, or other company seemed to be the far away history. Nowadays, individual is allowed to create and contribute the content to the internet reaching their specific group of audience within a second and with low production cost (Hargittai, 2000). In the art world, one of the clear examples could be to the ‘Yayoi Kusama fever’ – the spread of picture of Yayoi Kusama’s Infinity Mirror Room’ on Instagram in 2017 which, suddenly, made Yayoi Kusama become the household name (Eastburn, 2020).

User-generated Content (UGC) & Influencer

Social media platform is the hallmark for participatory culture expression in which users are invited to actively

participate in the creation and circulation of 'new content' (Fuchs, C. 2021 site on Jenkins 2008, 331). The term 'content' in this context refer to the user-generated content (UGC) which, at the its nature, is not distributed through the top-down fashion but circulate throughout the grassroots level among the user. It was produced to achieve the eyeballs or earn impression. It fundamental propose is to be shared, remixed, or re-appropriated by other user (McNulty, 2021). Individual produces and perceive UGC in different ways including information seeking, emotional management need, to the self-expression and actualization (Shao, 2009).

UGC is being used to drive engagement and help create a community as people feel the involvement. The perceived utility of the UGC is determined by the functional value (satisfy desire characterized by practical objective and needs) and the emotional value (emotional pleasure people experience from the consumption) (Kim, Jin, Kim, & Shin, 2012). In a similar way, while the UGC produced by influencer or professional creator shared the same perceived value of UGC it also included the other factors that has an effected to the perceived value of the content including expertise, trustworthiness, attractiveness and the similarity (Chen Lou & Shupeii Yuan, 2019).

Mechanism that drive the accumulation and interchange of UGC among user in the social media is the new kind of consumption – Prosumption. Prosumption is the combination of the consumption and expressive production that refer to the reaction on the social media including “sharing”, “commenting” and “liking” content on social media platform (McNulty, 2021). Not to mention that platform also provide user the statistic of the content’s performance, the ‘liking’, ‘sharing’, ‘commenting’ are the powerful proxy which made UGC so appeal to those marketer who seek to strengthen customers 'relationships with products, brands, and companies (Jaakonmäki, Müller, & Vom Brocke, 2017). According to above phenomenons – both of its emotional value domination and the more sophisticated and measurable proxy, art content is moved away form the industry – its origin, toward something more like cultural commodity that was designed for serving entertainment objective and driving engagement among audiences.

Conclusion

The components inside value of art’s framework comprised of 5 domains including Intrinsic Value, Symbolic Value, Political Value and Social Value and Economic

With the purpose to highlight the dynamic and the transitional of the value as well as to respond to the research question, thus, in each framework, researcher will emphasize the dominant value – the value that has the high influenced on art (or art content).

The dominant value is *symbolic value* as it produced the class in the society.

Consequently, as Walter Benjamin did point out in his renown work 'Art in the age of Reproduction', the

symbolic value of art was challenge by the reproduction technology under the idea of *democratizing culture*.

Classical Visual Art (Figure 1)

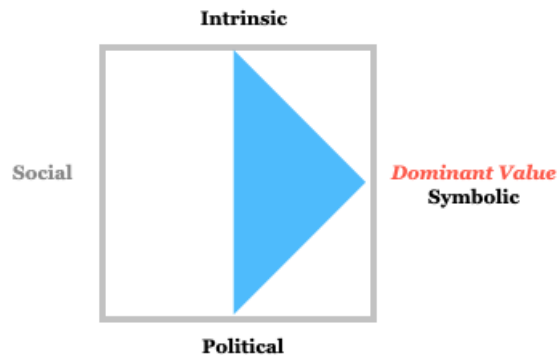


Figure 1. Classical Visual Art's value framework

Art Content (Figure 2)

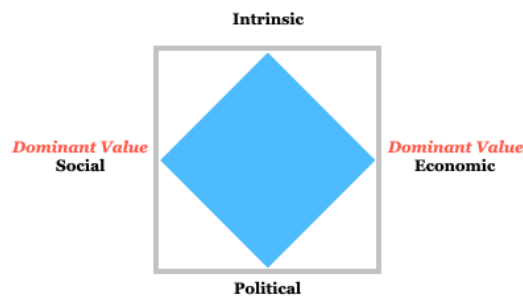


Figure 2. Art Content's value framework

The essential of art content is that it allow more people to access the art which reflect that domination of social value.

However, the growth of the art content highly related to 2 factors. The first is the growth of contemporary art market in US, and Europe due to the movement of Abstract Expressionism, Pop Art, Nouveau Realism and minimal art. And, the second is the maturity of the advertisement industry.

The two aforementioned forces have created the 2 streams of overlapped economic value. Art content can effect to the economic value of the art as it has the power to legitimate the art. But at the same time, the art content was dominate by the mass media quantitative measurement (rating and share) that is ruled by the advertising industries.

User-Generate Art Content (Figure 3)

User-generated art content inherit the same value of art content. However, as the nature of user-generated

content that highly associate to the emotional management and self actualization, the art content then present in the personal expression fashion rather than interact with the art industry.

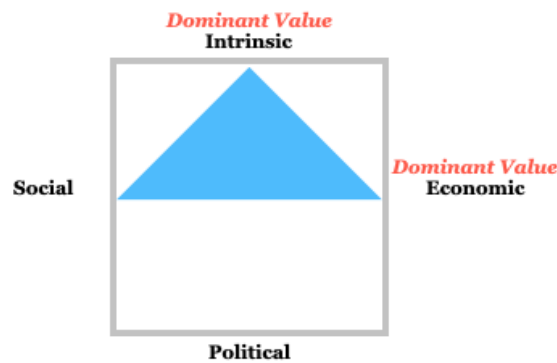


Figure 3. User-Generated Art Contents value framework

Not to mention the prosumption – the new kind of content consumption, that is the combination of the consumption and expressive production that refer to the reaction on the social media including sharing”, “commenting” and “liking” content on social media platform. The dominant value; therefore, the intrinsic value as it move audience in the more sentimental ways. Scholar Tess McNulty mention the changing of the substantial meaning of the word

'content' in social media that is “Content,” today, suggests entertainment — typically digital — that is a mere byproduct or afterthought, designed to do little more than facilitate some profit-driven process, like advertising or data collection.

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The Interplay of Mother's Pre-pregnancy Body Mass Index (BMI) and the Events of Pregnancy in India

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Abstract: The upsurge in overweight and obesity rates in reproductive-aged women is one of the major public health concerns of the 21st century. A growing body of research indicates that maternal obesity and overweight are linked to adverse maternal and neonatal outcomes. This study aims to assess the effects of pre-pregnancy overweight and obesity on pregnancy, labor, and delivery outcomes in women of singleton pregnancy. The study analyzed secondary from the Mother's Significant Feature (MSF) Dataset compiled in between February 2018 and March 2021 from 450 women in Maharashtra, India. The survey includes physical, social, lifestyle, stress level, and health outcome. Descriptive analysis, bivariate correlation, inferential analysis, binary logistic, and multinomial regression analysis were used for categorical and continuous variables as appropriate. Nearly 22% of the participant's pre-pregnancy BMI were overweight or obese. High pre-pregnancy BMI was associated with increased hours of labor ($p = 0.049$), induced labor ($p = 0.003$), miscarriage ($p = 0.004$), jaundice after the birth of the baby (neonatal jaundice) ($p = 0.013$), and had more likelihood to NICU stay ($p = 0.046$). Preterm birth was strongly associated with gestational diabetes ($p = 0.005$) or hypertension ($p = 0.002$). Overweight ($p = 0.001$) and elderly primi (first pregnancy at or after 35 years of age) mothers ($p = 0.006$) had a high likelihood of receiving fertility treatment while controlling other factors. Depressive mood was strongly associated with high screen time ($p = 0.000$), late night sleeping habits ($p = 0.000$), and high-stress levels ($p = 0.000$). This study reaffirmed the significance of providing pregnant women with higher BMI with specialized maternal care during pregnancy, labor, and delivery to promote health pregnancy and healthy baby. Future research may include data from extended and prolonged longitudinal studies or include a larger sample size of a different demographic of pregnant women.

Keywords: Overweight and Obese, Pre-Pregnancy BMI, Pregnancy Outcomes, Labor, Neonatal Complications

Citation: Reena, I. & Mumu, S. H. (2023). The interplay of Mother's Pre-pregnancy Body Mass Index (BMI) and the Events of Pregnancy in India. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 266-279), Denver, CO, USA. ISTES Organization.

Introduction

Obesity is a pressing global public health concern (Ng et al., 2014), and the most prevalent medical issue among women of reproductive age (American College of Obstetricians and Gynecologists' Committee on Practice Bulletins–Obstetrics, 2021). According to the WHO Global Health Observatory, 1.9 billion people were overweight in 2016, and 650 million were obese. Between 1975 and 2016, the number of obese people worldwide increased by about three times (Obesity and Overweight, n.d.). Most low- and middle-income countries are seeing a rapid rise in overweight and obese women (Abarca-Gómez et al., 2017). With a substantial, double-burdened population of over 1 billion people, India has seen a notable rise in the predominance of overweight and obesity (Rai et al., 2018). In India, women of childbearing age comprise 22.2% of the population (IAPSM | Indian Association of Preventive and Social Medicine, n.d.). According to the 2019–2021 Indian National Family Health Survey (NFHS)-5, around 24% of reproductive-aged women (15–49 years) were overweight or obese, causing the mean Body Mass Index (BMI) to rise from 21.9% in 2015-16 to 22.4% in 2019-21 (NFHS-5_INDIA_REPORT.Pdf, n.d.) (See Figure 1). Also, females of reproductive age were more likely to be overweight or obese because of hormonal (Lovejoy, 1998) and behavioral (Anekwe et al., 2020; Hasan et al., 2020; Kumar et al., 2022) factors. This is especially true for those with a higher socioeconomic status.

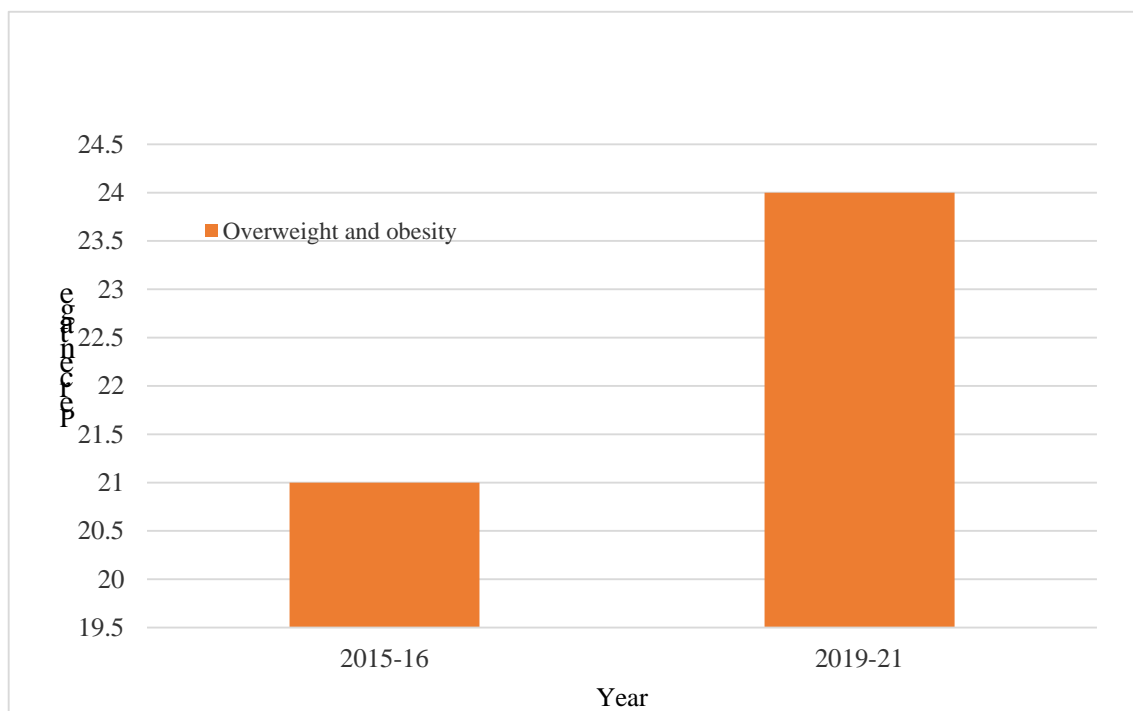


Figure 1. Proportion of Overweight and Obesity among Reproductive Aged Women

The relationship between pre-pregnancy BMI and pregnancy events is intricate. Multiple studies found that pre-conceptional overweight and obese women were adversely affected by pregnancy-related complications

(Bhavadharini et al., 2017; Choi et al., 2022) such as cesarean section (Gudipally et al., 2022), pre-eclampsia (L. Li et al., 2020), gestational diabetes mellitus (M. Li et al., 2022; Rahman et al., 2015), labor progression (González-Plaza et al., 2021a) and preterm delivery (Cnattingius et al., 2013), macrosomia (Liu et al., 2016; Zong et al., 2022), and even childhood obesity (Santangeli et al., 2015).

Although the current understanding of the intricate relationships between BMI and pregnancy outcomes has expanded awareness towards protecting the mother's and newborn's health over the past decade, several gaps remain. First, most studies on maternal morbidity and adverse effects have used large birth registries, reviews, and retrospective studies instead of data from interviews with health professionals and have looked at weight instead of BMI. Second, those evaluations have been conducted predominantly on European and American populations. However, limited research has investigated these relationships among the Indian people. The applicability of findings from prior studies to the Indian population may be affected by genetic, environmental, and dietary variables. Although our results add to the literature suggesting that a high pre-pregnancy BMI is associated with adverse pregnancy outcomes, most previously published works, have been conducted in developed countries. In contrast, our study focuses on the demographic population of India. Finally, our MSF dataset included BMI information for women in the preconception and predelivery windows, allowing us to address the health needs of women more precisely and effectively in this geographic area who are of reproductive age.

Method and Materials

Study Design and Data Source

The study used secondary data which were taken from the Mothers Significant Features (MSF) dataset. Data were collected between February 2018 and March 2021 from 450 women in Maharashtra, Mumbai metropolitan region of India. The preliminary study with the MSF dataset, whose overall objectives were to examine the mother's features for predicting preterm childbirth and the requirement of neonatal intensive care unit (NICU) facility for newborn using machine learning model (Deshpande & Ragma, 2021). Women right after the birth of a child were interviewed by medical personnel to contribute toward the MSF dataset creation mostly. Few data were collected through a hard copy of self-reported surveys distributed and online submissions from women who experienced childbirth. The survey includes physical, social, lifestyle, stress level, and health outcomes across the phases of reproductive life. The MSF dataset contains data on a variety of categorical and continuous variables.

The standardization of questions has been decided after brainstorming sessions with medical experts in the field of gynecology. The Institutional Review Boards at the collaborating hospitals approved this study, which complied with the declaration of Helsinki's principles for the ethical treatment of human participants. Additionally, informed written consent from study participants was obtained after proper explanation. Data were anonymized by a unique identity (UID) given to each mother across the spreadsheets. Further details on recruitment, eligibility, methodology, quality control, data collection, questionnaires, and vital statistics are

described in the related literature (Deshpande & Ragma, 2022). In our study, variables feature described in the surveys before and during pregnancy were linked to health outcomes records of the mother and the baby according to the UID provided.

Study Participants

The inclusion criteria were participation and completion of all questionnaires of the MSF dataset; the exposure and outcome data could be linked using a common UID; pre-pregnancy BMI ≥ 18.5 kg/m²; women with singleton pregnancies. This study excludes pregnancies with multiple gestations, pre-pregnancy BMI < 18.5 kg/m², and women with missing data. From 450 women compiled in the MSF dataset, 412 met the criteria and were included in the study (see Figure 2).

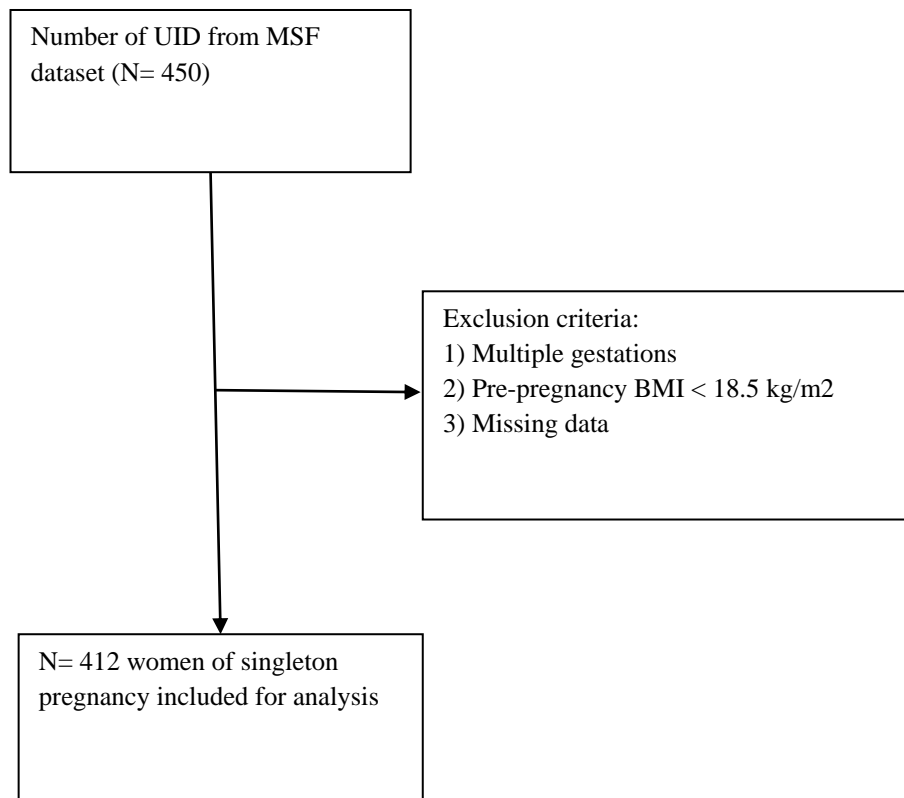


Figure 2. Flowcharts for Study Participants

Exposure and Outcome Variables

Participants were classified into normal-weight (18.5 to 23), overweight (23 to 27.5), and obese (>27.5) groups based on self-reported data on pre-pregnancy weight and height. The pre-pregnancy BMI (kg/m²) was computed as pre-pregnancy weight in kilograms divided by the square of height in meters (see Table 1). These categories were made using the World Health Organization's (WHO) suggested BMI cutoff criteria for Asian adult populations (Heslehurst et al., 2012; WHO Expert Consultation, 2004).

Several birth events like labor hour, type of labor, neonatal jaundice, NICU (Neonatal Intensive Care Unit) stay, and delivery complications in pregnancy were included as the main outcome measures. The effect of pre-pregnancy BMI categories on these outcomes were explored. Correlations between a few variables were not considered due to very low incidence. Control of covariates (multiple pregnancies, gestational diabetes, hypertensive disorders of pregnancy, etc.) were done to achieve a conservative estimate of the effects and relationship.

Table 1. Comparison of Asian and General Population BMI Classifications, WHO

BMI classification (kg/m ²)	Underweight	Normal weight	Overweight	Obesity
General Population	<18.5	18.5-24.9	25.0-29.9	≥30
Asian population	<18.5	18.5-23	23-27.5	>27.5

Statistical Analysis

All statistical analyses were performed using SPSS version 26.0 (SPSS, Chicago, IL, USA). All study variables were reported with descriptive statistics. The mean and standard deviation (SD) of continuous variables were demonstrated, and frequency and percentage were used to represent categorical data (see Table 2). The age of the mother was presented as both continuous and categorical variable. The correlations between pre-pregnancy BMI categories and baseline variables were investigated utilizing the Chi-square test for categorical variables and ANOVA for continuous ones. Bivariate correlations were conducted to assess the relationship between continuous variables (Pearson's correlation) and between categorical variables (Spearman's correlation). Binary logistic regression was performed to evaluate the relationship between overweight females and elderly mothers on the likelihood of fertility treatment to attain pregnancy (Odds ratio calculated). Multinomial regression analysis examined the association between pre-pregnancy BMI and complications like diabetes and hypertension during pregnancy against the mode and outcome of delivery, controlling for other factors, and odds ratios were calculated with the 95% confidence intervals (CIs). The P-value cutoff for statistical significance was 0.05 for all two-sided hypothesis testing.

Results

The dataset includes 78.2% normal weight, 18% overweight, and 3.9% obese pre-pregnancy BMI women. Mean of the age of the mother is 26.91 years (± 4.54). Table 2 compares women from the three BMI categories with baseline characteristics. Significant correlations were found with physical factors like age ($p=0.034$, 0.007), stress level during pregnancy ($p=0.012$), medical history like fertility treatments ($p=0.000$), number of miscarriage ($p=0.004$), physical condition such as PCOS ($p=0.001$), thyroid issue in pregnancy ($p=0.007$), obstetrics factors such as induced labor ($p=0.003$), labor hours ($p=0.049$), factors of newborn such as weight of the baby at birth ($p=0.000$), and jaundice of the baby ($p=0.013$). As seen in the Figure 3, the newborn of

overweight mothers was more likely to develop jaundice after birth [$\chi^2(2, N=412)=8.759, p=0.013, \phi_c=0.146$ (small to medium effect), $\alpha = 0.05$] and the mean labor hours for overweight group was higher [$F(3, 436) = 3.007, \eta^2=0.02$ (small effect), $p = 0.030$].

Table 2. Baseline Characteristics of Study Participants (n=412)

	Total n=412	Normal weight n (%) n= 322 (78.2)	Overweight n (%) n= 74 (18)	Obese n (%) n= 16 (3.9)	<i>p</i> value
Frequency (Percentage)					
Age					0.034
15-25	183 (44.4)	155 (48.1)	24 (32.4)	4 (25.0)	
26-30	150 (36.4)	111 (34.5)	31 (41.9)	8 (50.0)	
31-35	61 (14.8)	45 (14.0)	12 (16.2)	4 (25.0)	
>35	18 (4.4)	11 (3.4)	7 (9.5)	0 (0.0)	
Polycystic Ovarian Syndrome (PCOS)					0.001
No	371 (90)	298 (92.5)	58(78.4)	15(93.8)	
Yes	41 (10)	24 (7.5)	16(21.6)	1(6.3)	
Conceived after Fertility Treatment					0.000
No	385 (93.4)	309 (96)	63 (85.1)	13 (81.3)	
Yes	27 (6.6)	13 (4)	11 (14.9)	3 (18.8)	
Stress Level in Pregnancy					0.012
Pleasant	323 (78.4)	258(80.1)	49(66.2)	16(100)	
Somewhat stressful	85 (20.6)	62(19.3)	23(31.1)	0	
Very Stressful	4(1)	2 (0.6)	2(2.7)	0	
Thyroid issues in Pregnancy					0.007
No	396(96.1)	312 (96.9)	71(95.9)	13(81.3)	
Yes	16(3.9)	10 (3.1)	3 (4.1)	3 (18.8)	
Hypertension Issues in Pregnancy					0.814
No	394 (95.6)	309(96)	70(94.6)	15(93.8)	
Yes	18 (4.4)	13(4.0)	4(5.4)	1(6.3)	
Gestational Diabetes					0.325
No	402 (97.6)	316 (98.1)	71 (95.9)	15 (93.8)	

Yes	10(2.4)	6(1.9)	3(4.1)	1(6.3)	
Jaundice of the Baby after Birth					0.013
No	370 (89.8)	294 (91.3)	60 (81.1)	16 (100)	
Yes	42 (10.2)	28 (8.7)	14 (18.9)	0	
Caesarean Section					0.747
No	201 (48.8)	154(47.8)	39(52.7)	8(50)	
Yes	211 (51.2)	168 (52.2)	35 (47.3)	8 (50)	
Preterm Baby					0.335
No	343 (83.3)	264 (82)	64 (86.5)	15 (93.8)	
Yes	69 (16.7)	58 (18)	10 (13.5)	1 (6.3)	
Induced Labor					0.003
No	399 (96.8)	316 (98.1)	69 (93.2)	14 (87.5)	
Yes	13 (3.2)	6 (1.9)	5 (6.8)	2 (12.5)	
Weight of the Baby at Birth					0.000
Low birth weight (<2.5kg)	122(29.9)	100(31.3)	20 (27.4)	2 (12.5)	
Normal (2.5-4kg)	285 (69.9)	219 (68.7)	53 (72.6)	13(81.3)	
High Birth Weight(>4kg)	1(0.2)	0	0	1(6.3)	
NICU stay					0.046
No	314 (76.2)	239 (74.2)	61 (82.4)	14 (87.5)	
Yes	98 (23.8)	83 (25.8)	13 (17.6)	2 (12.5)	
Means ± SD					
Age, year	26.91 ± 4.54	26.54 ± 4.43	28.31 ± 4.72	27.75 ± 4.74	0.007
Hemoglobin Level of the Mother	12.07 ± 7.07	12.1517 ± 7.95	11.97 ± 1.71	10.98 ± 1.31	0.805
Number of Miscarriage	0.26 ± 0.66	0.19 ± 0.54	0.58 ± 0.97	1 ± 1.41	0.004
Hours of Labor	10.37 ± 6.79	10.35 ± 6.77	11.31 ± 6.69	6.44 ± 6.52	0.049

Note. Data presented as n (%) (χ^2 test) for categorical variables or mean (95% confidence intervals) (analysis of variance ANOVA) for continuous variables. *P* value is significant at <0.05 level

A bivariate Pearson's product-moment correlation coefficient (*r*) was calculated to assess the size and direction of the linear relationship between continuous variables. Prior to calculating *r*, the assumption of normality, linearity, and homoscedasticity was evaluated and found to be supported. Spearman's rank order correlation was used to explore the relationship between categorical variables, between mood and lifestyle factors of mothers during pregnancy, and between depressive mood and late-night sleeping habits. Kendall's tau-b generated similar correlations. Visual inspection of the scatterplot of mood against lifestyle factors in the statement confirmed that the relationship between these variables was non-linear and monotonic.

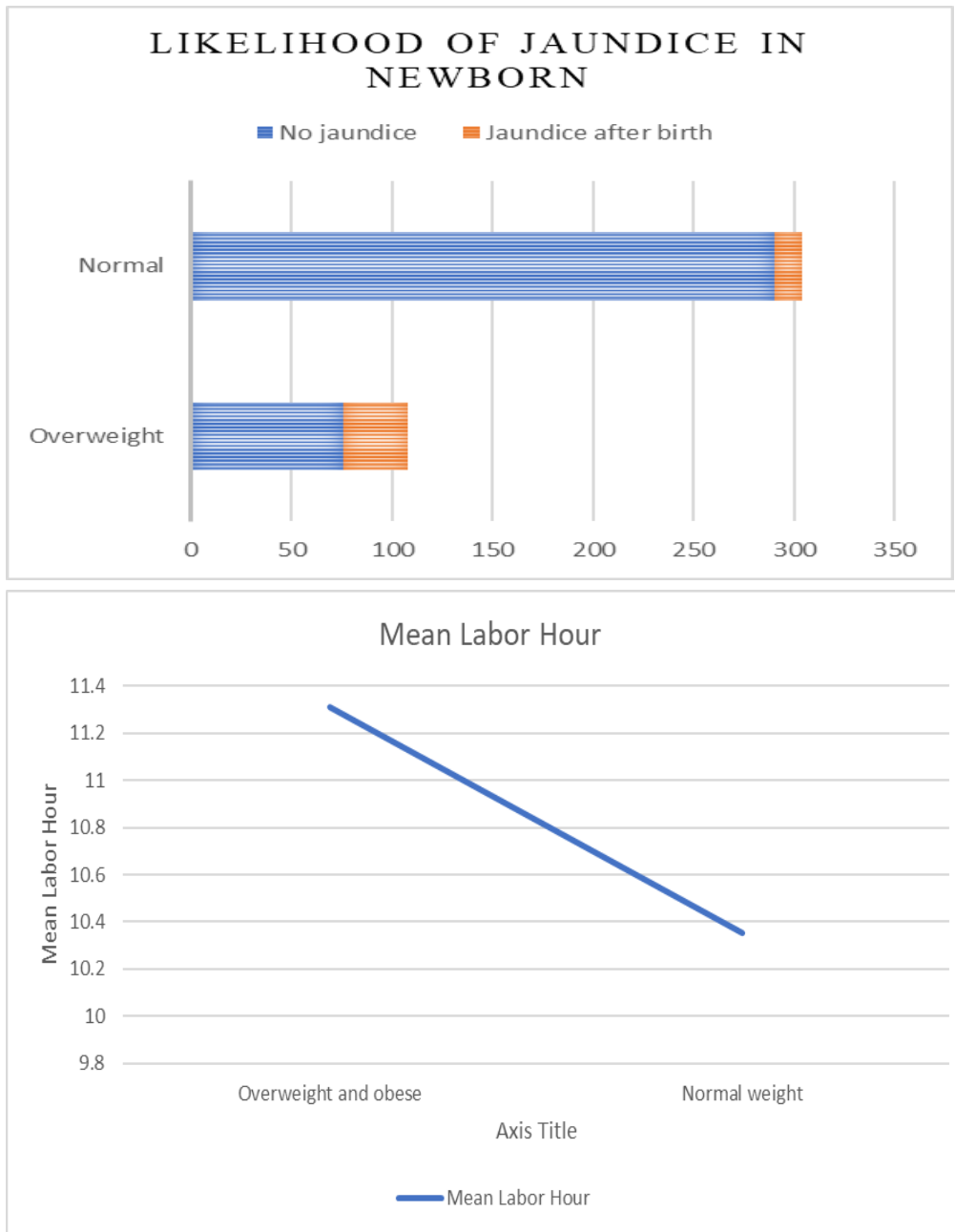


Figure 3. Factors Association in Pregnancy

Binary logistic regression was performed to assess the impact of several factors on the likelihood that respondents would report that they needed fertility treatment to achieve a pregnancy (see Table 4). The model contained four independent variables elderly primi (first pregnancy at or after the age of 35 years), dummy coded two categories of BMI (normal weight; overweight), use of the contraceptive, duration of contraceptive, and omnibus test of model coefficient. The model explained between 10% and 25.6% of the variance in fertility treatment and correctly classified 94.4% of cases. The strongest predictor was pre-pregnancy overweight

individual, recording an odds ratio of 5.9. This indicated that respondents with overweight BMI were nearly six times more likely to need fertility treatment to attain pregnancy, controlling for all other factors in the model. Multinomial regression analysis examined the association between BMI and complications like diabetes and hypertension during pregnancy against the mode and outcome of delivery, and odds ratios were calculated. Among other variables, gestational hypertension and gestational diabetes were the most associated with preterm birth.

Table 3. Bivariate Correlations

Bivariate Pearson Correlation between Continuous variables			
Variables	Number of Miscarriage	Hours of labor	Hospital Stay
Pre-pregnancy BMI	r (df)= .21 p= .004		
Haemoglobin Level of Mother	r (df)= .23 p= .002		
Gestational Weight Gain		r (df)= .15 p= .046	
Weight of the Newborn			r (df)= -.19 p= .000

Note. N= 412 for all correlations presented, r= Pearson's Correlation Efficient (-1 to +1), df= degree of freedom is calculated as N-2, p= significance two-tailed at 0.05 level

Bivariate Spearman's Rank Correlations between Mood and Lifestyle Factors	
Variable	Depressive Mood during Pregnancy
Late Night Sleeping	Rs(df)= .29 p= .000
High Stress Level	Rs(df)= .36 p= .000
High Screentime	Rs(df)= .45 p= .000
Sleep (< 7hr/day)	Rs(df)= .20 p= .000
Exercise during Pregnancy	Rs(df)= -.13 p=.004
Sleep (> 8hr/day)	Rs(df)= -.20 p= .000
Exposure to Morning sunlight (3 times/week)	Rs(df)= -.16 p= .001

Note. N= 412 for all correlations presented, r= Spearman's Rank Correlation Efficient (-1 to +1), df= degree of freedom is calculated as N-2, P= significance two-tailed at 0.05 level

Table 4. Logistic Regression

Binary Logistic regression for likelihood of fertility treatment			
Pregnancy Factor	OR	95% CI for EXP (B)	<i>p</i>
Pre-pregnancy Overweight	5.863	1.405-24.465	0.015
Pre-pregnancy Normal weight	3.893	1.509-10.047	0.452
elderly primi	5.325	1.617-17.531	0.006
Use of contraceptive	0.629	0.037-10.697	0.748
Multinomial Logistic regression for preterm birth			
Pregnancy Factor	OR	95% CI for EXP (B)	<i>p</i>
Gestational diabetes	0.056	0.013-0.231	0.000
Hypertensive disorder in pregnancy	0.123	0.042-0.359	0.000

Note. OR odds ratio, CI confidence interval, *p* value is significant at <0.05 level

Discussion

Our study confirmed previous findings on declining perinatal health outcome in relation to high BMI. In line with the previous study (González-Plaza et al., 2021b), we found the likelihood of induced labor, and also miscarriage, increased hours of labor, NICU stay, and jaundice after the birth of the baby in overweight mothers. Moreover, pregnancy complications like gestational diabetes or hypertension were more likely to cause preterm birth. Additional variables were explored, and depressive mood in pregnancy was found to be associated with late-night sleeping habits, less than seven hours of sleep a day, increased screen time, and a high stress level from work, whereas a negative correlation is seen with exercise, exposure to morning sunlight, and more than eight hours of sleep. In addition, both the overweight female and elderly primi group of pregnant women have had a likelihood of receiving fertility treatment to attain pregnancy. Contrary to existing literature (Vinturache et al., 2014), evidence of a statistically significant association between pre-pregnancy BMI and mode of delivery or pregnancy complication like gestational diabetes or hypertension were not found.

One of the strengths of the study is that correlational analysis drawing inferences (Gogtay & Thatte, 2017) is conducted between variables, and the dataset is recorded by interviewing women just after childbirth to get the most accurate data and avoid recall bias. Our study dives breadth and depth through descriptive, correlational, and inferential tests to understand and explore the interplay between factors influencing lifestyle factors, fertility, pregnancy, and childbirth outcomes. The study provides valuable insights into the effects of pre-pregnancy overweight and obesity on pregnancy, labor, and delivery outcomes in women of a singleton pregnancy, which can inform practitioners in this domain to formulate tailored maternal care to counter health challenges incurred by pregnant women and newborns. Our study is, however, limited by the use of secondary data, and the variables were limited to those collected in the dataset, which may not have captured all the relevant factors that may influence pregnancy outcomes. The study relied on self-reported pre-pregnancy BMI,

which may not always be accurate and may be subject to recall bias. The small sample size of the obese group makes it difficult to draw statistically significant inferences, so many of the analyses were conducted in the overweight and obese group. The findings may not be generalizable to other demography and populations. The study design is subjected to potential confounders for which variables were not available. Despite restricted generalizability of this study, our results apply to rural to peri-urban areas of India. It is necessary to conduct additional research to determine whether these results can be applied to other populations.

Conclusion

Given that 60% of pregnancies are now planned in advance (Bahri Khomami et al., 2021) and that maternal obesity complicates close to 39 million pregnancies worldwide each year (Chen et al., 2018), women have the chance to make lifestyle changes that will improve pregnancy health and lower the risk of unfavorable pregnancy outcomes. Priority should be given to developing national guidelines consistent with international practice protocol to reduce associated complications and promote positive outcomes for both the mother and the child. Multidisciplinary approaches to the management of obesity are necessary from the time of conception through the postpartum period.

Recommendations

This study offers several launching points for potential studies. Research is greatly needed to comprehend better the relationships discussed in this paper and causation. Pre-pregnancy behavioral and clinical trial studies with a focus on the structured promotion of health and lifestyles are required. Future research may include but is not limited to validating or contrasting our findings through extended and prolonged longitudinal studies or incorporating a larger sample size of a different demographic of pregnant women and assessing the long-term effects of pre-pregnancy BMI on maternal and neonatal health beyond the immediate postpartum period. BMI has drawbacks, and the most effective measures for detecting adiposity in pregnancy are still unknown (Fakhraei et al., 2022). Determining a pregnancy-specific measure and assessing the efficacy of the interventions can help policymakers to combat obesity, the century's major health challenge.

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Exploring the Value Creation Process of NFT (Non-fungible Token) Creators in Creator Economy based on the Perceived Value of China's Customer Personas

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Abstract: NFTs have empowered the digital arts market, with Beeple's artwork selling for \$69.3 million, showcasing the immense potential of NFTs. China's unique cryptocurrency regulations and NFT positioning as "digital collectibles" have shaped a distinct market from the overseas market. Despite this, the Chinese NFT industry is still rapidly growing, with an estimated value of RMB 28 billion by 2026. NFTs have transformed the creator's economy, enabling direct engagement with consumers and granting creators more control over their intellectual property, pricing, and income. The creators receive revenue more directly from fans, therefore, it is essential for creators to understand the perceived value of customers' NFT purchase intention. This research aims to explore consumer perceived value and provide suggestions for NFT creators throughout the value creation process (ideating, designing, minting, trading, and engaging). The anticipated outcomes include generate three different customer personas and their perceived value, based on that give suggestions to creators. This research fills a gap in consumer-focused NFT research and offers insights for creators in the Chinese market.

Keywords: Non-fungible Token (NFT), Creator Economy, Customer Personas, Perceived Value, Cluster Analysis

Citation: Lee, S., Yang, C., & Chien, W. (2023). Exploring the Value Creation Process of NFT (Non-fungible Token) Creators in Creator Economy based on the Perceived Value of China's Customer Personas. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 280-292), Denver, CO, USA. ISTES Organization

Introduction

Blockchain is mainly a technology for storing data on the back end. The technology used now stores data on

central server, which brings many disadvantages, such as data tampering and being used freely by the company that holds the data. Blockchain is a form of Distributed Ledger Technology (DLT), which consists of chains of blocks recording data instead of only central server records, as one of the definitions “digital, decentralized and distributed ledger in which transactions are logged and added in chronological order with the goal of creating permanent and tamperproof records” (Treiblmaier, 2018).

NFTs are digital data written to the blockchain that are unique and immutable; NFTs can be in various forms of digital information, including images, videos, and posts, and even physical objects can be associated with and stored in the blockchain to ensure their uniqueness (Hofstetter et al., 2022). NFT is basically another successful application of blockchain (Dowling, 2022a). The concept FT (Fungible Token) is the antonym of NFT (Non-fungible Token). The attributes of NFT include unique, non-interchangeable, and non-divisible. A painting NFT is unique and cannot be swapped for another painting, and the painting itself is unique. NFT is an entire artistic statement; if divided, it has no value. In contrast, the attributes of FT are Uniform, Interchangeable, and divisible; currency or cryptocurrency is a typical FT; your 1 NT is identical to all others, you can exchange it with others, and the prices remain (Supreme People's Court, 2021) the same. If necessary, the currency can be divided into smaller denominations.

NFT industry continues to flourish, daily sales of NFT already reached the tens of thousands (Barber, 2022), and has a large group of buyers (see Figure 1), not only because of the disruptive technology, but also because the concept of NFT assets is already established in customers' minds (Dowling, 2022b). Also, the NFT has profoundly impacted the contemporary creative industry. Strong intermediaries currently exist between creators in the creative industry and their ultimate customer/buyer, which prevents creators of supplying original content to customer/buyer, which is called “transaction costs,” mainly in the form of: Lack of standardization, Lack of trust, long wait to receive payment, Power concentration. NFT provide an opportunity to address transaction costs (Malik et al., 2022). In the NFT industry, the creator is the one who produces the digital arts, and by using NFT, creators can reduce or even eliminate the requirement for intermediaries. So, the NFT will encourage creators to produce works, and a new creator economy model may be developed.

In contrast to a tiny government market elsewhere, China is a regulated market. From September 15, 2021, it is illegal to utilize Cryptocurrency (Supreme People's Court, 2021), which is widely used in global market to make purchases NFT, and only fiat currency can be used for transactions in China. The benefit is that it is not associated with the volatile cryptocurrency market, and the fiat currency is rather stable. The three associations (National Internet Finance Association of China, China Banking Association, Securities Association of China) issued a joint initiative to prevent financial risks (China Banking Association, 2022), but Chinese law does not strictly prohibit secondary markets at the moment, so among China's 500+ both primary and secondary platforms (source: shucangjian), there are still many platforms (see Figure 2) offering secondary trading services, but they all keep a low profile and claim to be against financial activities.

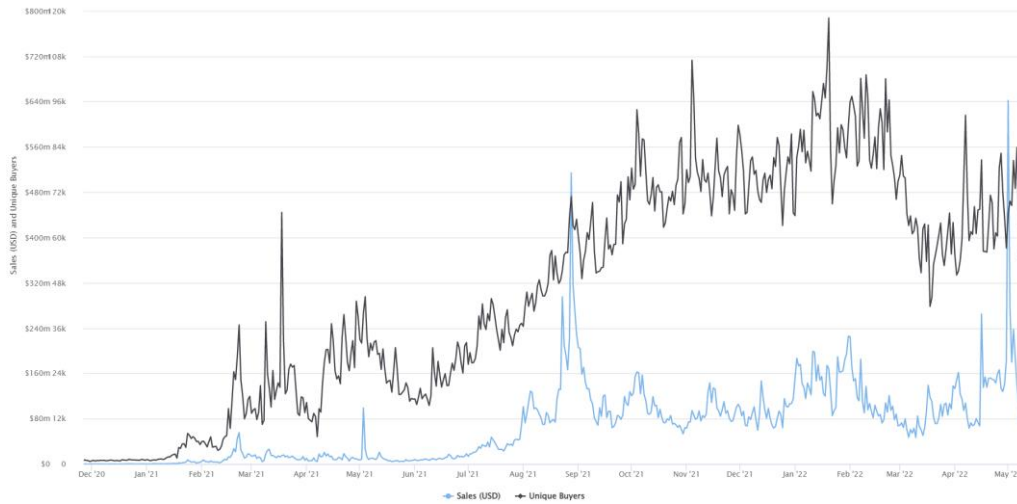


Figure 1. NFT global sales volume index
(Source: CryptoSlam)

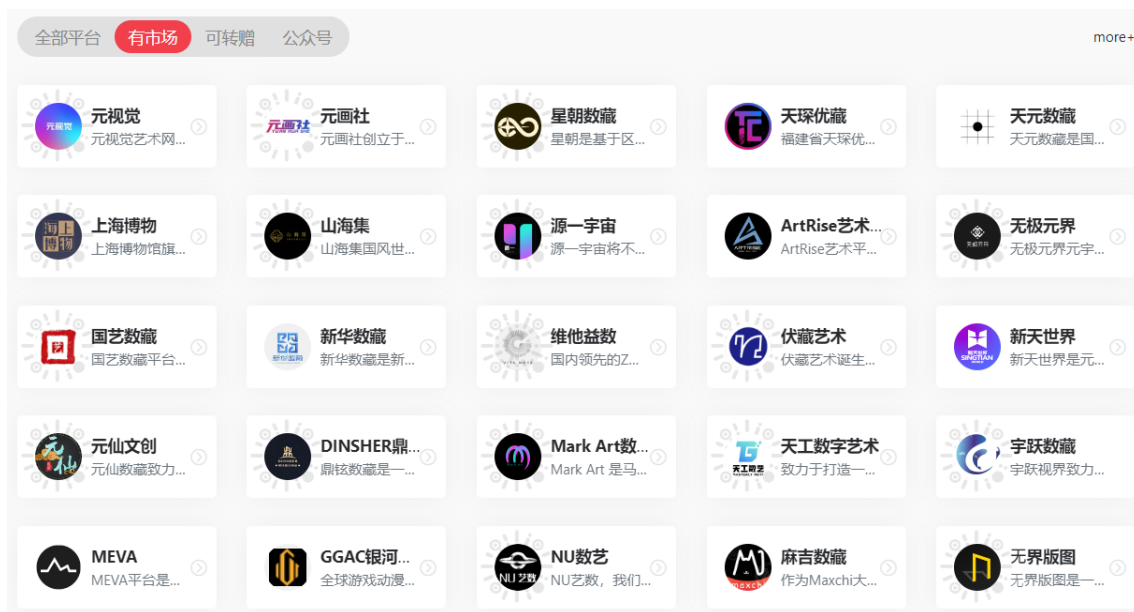


Figure 2. Part of marketplace in China
(Source: <https://www.szcp100.com/>)

Research Objective

Using the research objective to generally divide the study into 3 phases, the first phase provides an overview of the NFT market in China and the global market, as well as the differences between these two markets. Moreover, I want to emphasize the creator economy revolution that NFT brought. In the second phase, I will focus on the Chinese market, with a particular emphasis on the customer, in order to discover the perceived value of China's NFT customers. Relying on pioneering research, I will classify several personas and use them to identify the perceived value. The final section of the research attempts to provide guidelines for the whole value creation process based on the customers' perceived value; the value creation process may be a creator

from before to after the minting of NFTs. From the perspective of customers, what can be done to assist the transformation of the creator economy? The following are the three objectives of this research:

RO1. To explore the NFT ecosystem and stakeholders in China market and identify its difference from the global market.

RO2. To classify the perceived value of purchase intention from the perspective of China's NFT customer personas.

RO3. To provide the value creation process for NFT creator in creator economy based on the perceived value of China's NFT customer personas.

Research Question

Based on the research objectives, the following research questions are developed:

RO1. To explore the NFT ecosystem and players in China market and identify the difference with global market.

- 1) What is the NFT industry and its ecosystem in China market and who are the stakeholders in this ecosystem?
- 2) What is the characteristics of China's NFT ecosystem and how is it different from the global market?

RO2. To classify the perceived value of purchase intention from the perspective of China's NFT customer personas.

- 1) What are the factors affecting the purchase intention of China's NFT customers?
- 2) What is the category of perceived value of purchase intention from China's NFT customer?
- 3) What are the personas of China's NFT customers by their perceived value of purchase intention?

RO3. To provide the value creation process for NFT creator in creator economy based on the perceived value of China's NFT customer personas.

- 1) What are the role and challenges of NFT creator in NFT's creator economy?
- 2) How can a value creation process for NFT creator be identified based on the perceived value of China's NFT customer personas?

Literature Review

Blockchain

Blockchain is a technology for storing and recording data (Peres et al., 2022). Blockchain is a form of

Distributed Ledger Technology (DLT) and is a subset of it. It is defined as a “digital, decentralized and distributed ledger in which transactions are logged and added in chronological order with the goal of creating permanent and tamperproof records (Treiblmaier, 2018)”. There is no need for a central server and it consists of a chain of blocks that have a continuously growing and immutable record of data. The basic unit of blockchain involves one or more entities in the transaction, which is the process of payment but also in the transfer of information.

Each block in the blockchain contains coded transaction data, which includes events, locations, transfer amounts, buyer and seller information, etc. There is a unique point fingerprint in a block called hash, which identifies the block and its contents. After the block is built, any change in the block will result in a change in the hash. The last line of code of each block is the first line of code of the next block (Risius & Spohrer, 2017). The first block is also particularly meaningful and is called the Genesis Block, written by the enigmatic Bitcoin founder Satoshi Nakamoto, who published a paper entitled "Bitcoin: A Peer-to-Peer Electronic Cash System" (Nakamoto, 2009).

Coins have two sides, and blockchains have their drawbacks as well, the most criticized is the huge power consumption, the electricity used for bitcoin mining has been equivalent to the energy consumption of the entire country of Sweden (Cambridge, 2022), thus aggravating environmental problems.

NFT Ecosystem

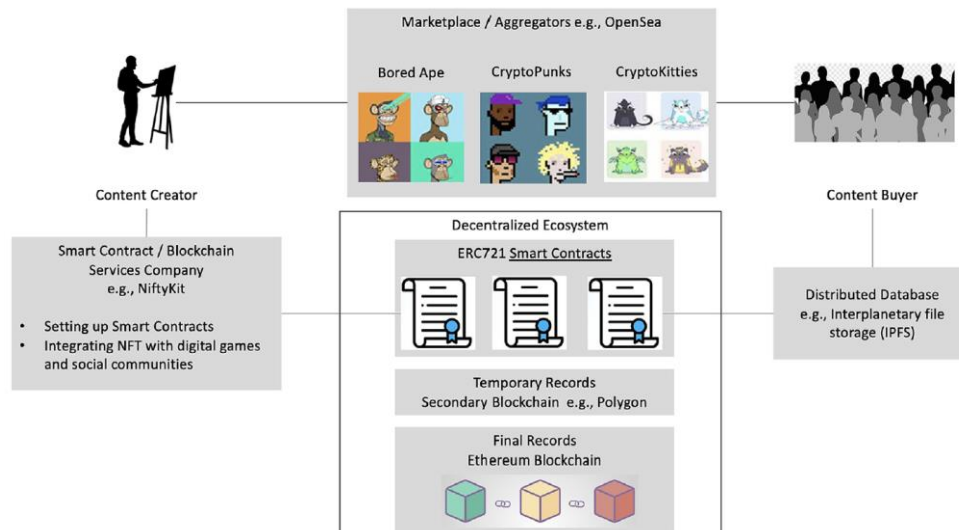


Figure 3. Top marketplace (OpenSea) connect with Stakeholders

(Source: Malik et al, 2022)

Malik et al. (2022) briefly discussed the NFT ecosystem using marketplace perspective (see Figure 3), which is roughly divided into three players: content creators, intermediaries, and content buyers. He made an interesting

point that the NFT content now relies on a decentralized ecosystem of smart contracts, sidechains, and primary blockchain; this merely changes how data is stored compare to the Web2 era; initially, they store in one server, which carries a high level of risk, but not storing in blockchain can make the data more secure. The interesting part is that centralized service providers like OpenSea continue acting as intermediates, which is at odds with the idea of blockchain, but perhaps this is how the NFT industry is developing.

China Market of NFT industry

China NFT industry mapping (see Figure 4), the top of the figure is the international industry mapping), respectively, the underlying blockchain technology, the marketplace platform (primary and secondary market), and the NFT issuers (including some brand), the figure shows some of the current more top companies' players (Cinda, 2022).

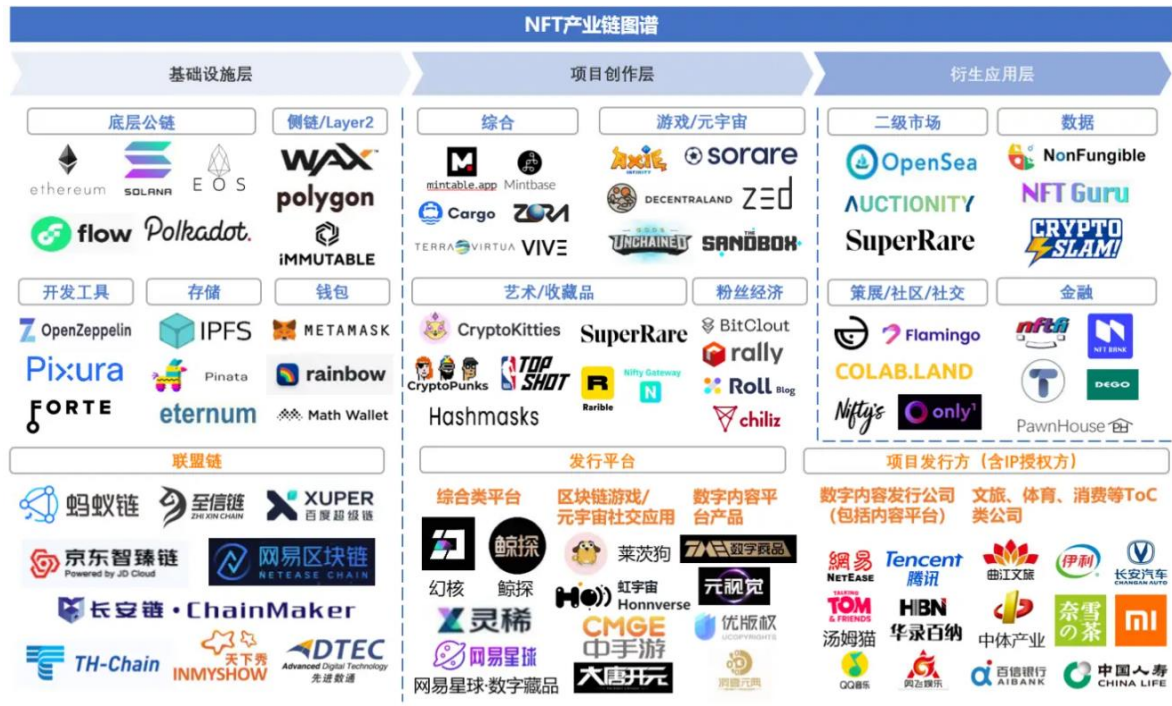


Figure 4. NFT industry map
(Source: Cinda Securities, 2022)

Creator Economy

A creator is someone who produces or owns content for the Internet and shares their content with others, which can be in the form of text, images, video, sound, and many other forms. There are more than 50 million people worldwide who consider themselves creators, and more than 2 million of them are professional creators (Geysler, 2022). The creator economy is the generation of economic revenue with the help of authoring tools, content distribution platforms and a range of other creator-related services.

Looking back at the history of the creator economy, in the Web 1.0 era, it was characterized by read-only static page display, and it was difficult to interact with users due to technical limitations, so the content was created by the platform and owned by the platform, and the creators at this time were small in scale and mainly professional people, such as photographers and writers in the news media, etc. The characteristics of the Web 2.0 era were not only readable, but also writable data, and the trend was to give more people the right to voice. In this era is also characterized by a shift in end products from PC to mobile (see Figure 5), more convenient for users to connect to the network. The key to Web 2.0 compared to Web 1.0 is not the technical breakthrough, but the decentralization guiding ideology (Radionova & Trots, 2021), from the original Internet system controlled by a small number of resources to a bottom-up, the collection of the majority of users to Content creation and social interaction of the "participatory" Internet. More types of creators can use the platform to create their own content, and there are even a large number of professional creators appearing. The usual business model of Web2.0 creator economy is to accumulate a certain number of followers and then cash in through advertising (Bhargava, 2022). But also has its drawbacks, in Web2.0 era, because of the algorithm recommendation, so the head creators can get more exposure opportunities, so there are still a large number of creators can not get exposure opportunities, it is difficult to profit, so Web3.0 was born, compared to the previous two Web, web3.0 for the back-end storage innovation, and more decentralized, trying to weaken the influence of the intermediaries, to support the data user Created, user-owned, and user-controlled.

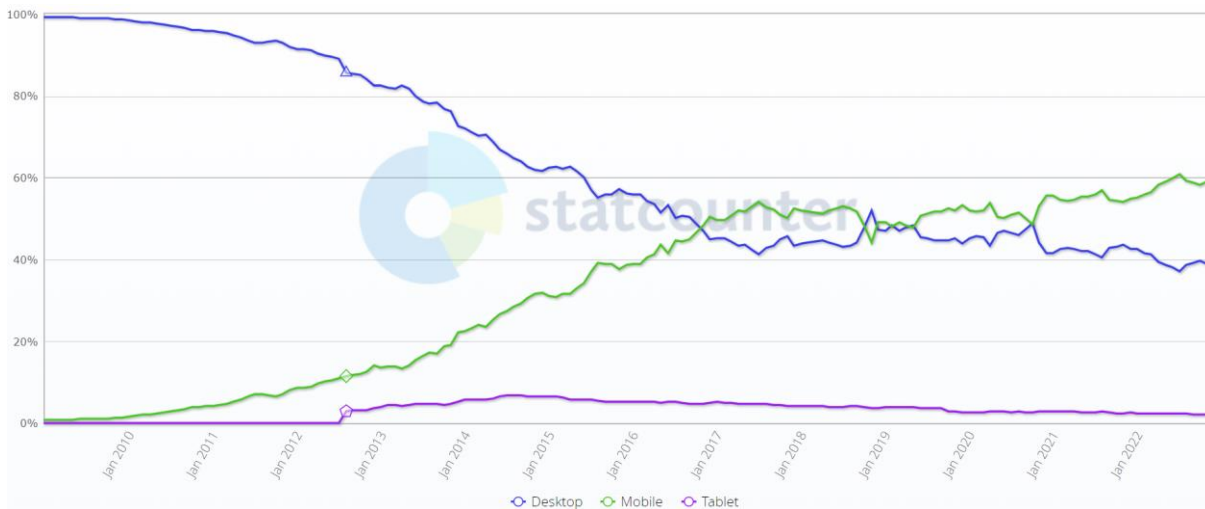


Figure 5. Desktop vs mobile vs tablet market share worldwide (Jan 2009 - Nov 2022)

(Source: Statcounter)

Value Creation Process

The entire process of mining NFT is what creates value, according to Li and Chen (2022), who noted that when launching a new NFT, a typical project frequently involves ideation, design, minting, trading, and continuous engagement (see Table 1), When it comes to releasing NFT, it is feasible to draw this process and learn what some successful cases have done. This research is attempting to make more recommendations on this process from the consumer's point of view to assist creators create better NFT.

Table 1. The process of launching an NFT project

(Source: Li and Chen)

Stage	Key activities
Ideating	<ul style="list-style-type: none"> ✓ Develop new ideas for a new NFT project. ✓ Jumpstart a new NFT community
Design	<ul style="list-style-type: none"> ✓ Create digital assets to be represented as NFTs. ✓ Design a business model for digital assets.
Minting	<ul style="list-style-type: none"> ✓ Assign a unique digital token to each digital asset on a blockchain. ✓ Attract potential collectors to participate in the primary sales
Trading	<ul style="list-style-type: none"> ✓ Activate a marketplace for NFT trading. ✓ Continue to serve buyers and sellers.
Engaging	<ul style="list-style-type: none"> ✓ Engage with NFT holders to maintain a vibrant NFT community. ✓ Unlock new utilities for NFT holders.

Perceived Value

Perceived value is a customer's overall perception or evaluation of a product or service (Bolton & Drew, 1991), usually influenced by how well the product or service meets the customer's needs, and can be measured by the price the customer is willing to pay for the product or service. Perceived value is particularly important nowadays because companies can improve users' purchase intentions by enhancing their perceived value, perceived value is not only a key factor in maintaining long-term customer relationships, but also influences users' purchase intention (Zeithaml, 1988) and the value a company conveys through its products is a reflection of differentiation from competitors (Kim et al., 2008).

Persona in Customer Study

In customer study, a persona represents the identity of an individual following customer segmentation. Personas have demonstrated benefits that go beyond what numbers alone can provide for identifying customer segments (Pruitt, 2003). A persona is a collaborative effort by participants from many domains to identify, construct, and assess segmented customers that may be used to achieve certain performance metrics, such as advertising engagement, task speed, ease of use, etc. Apparently, personas are part of design processes and industry procedures (Eriksson et al., 2013).

Research Design

As described in Figure 6, the researcher divide the research into three phases according to research objectives, with the first phase focusing on the ecosystem and stakeholders of the global and Chinese NFT markets. To achieve this objective, I will do a literature review and analyze secondary data.

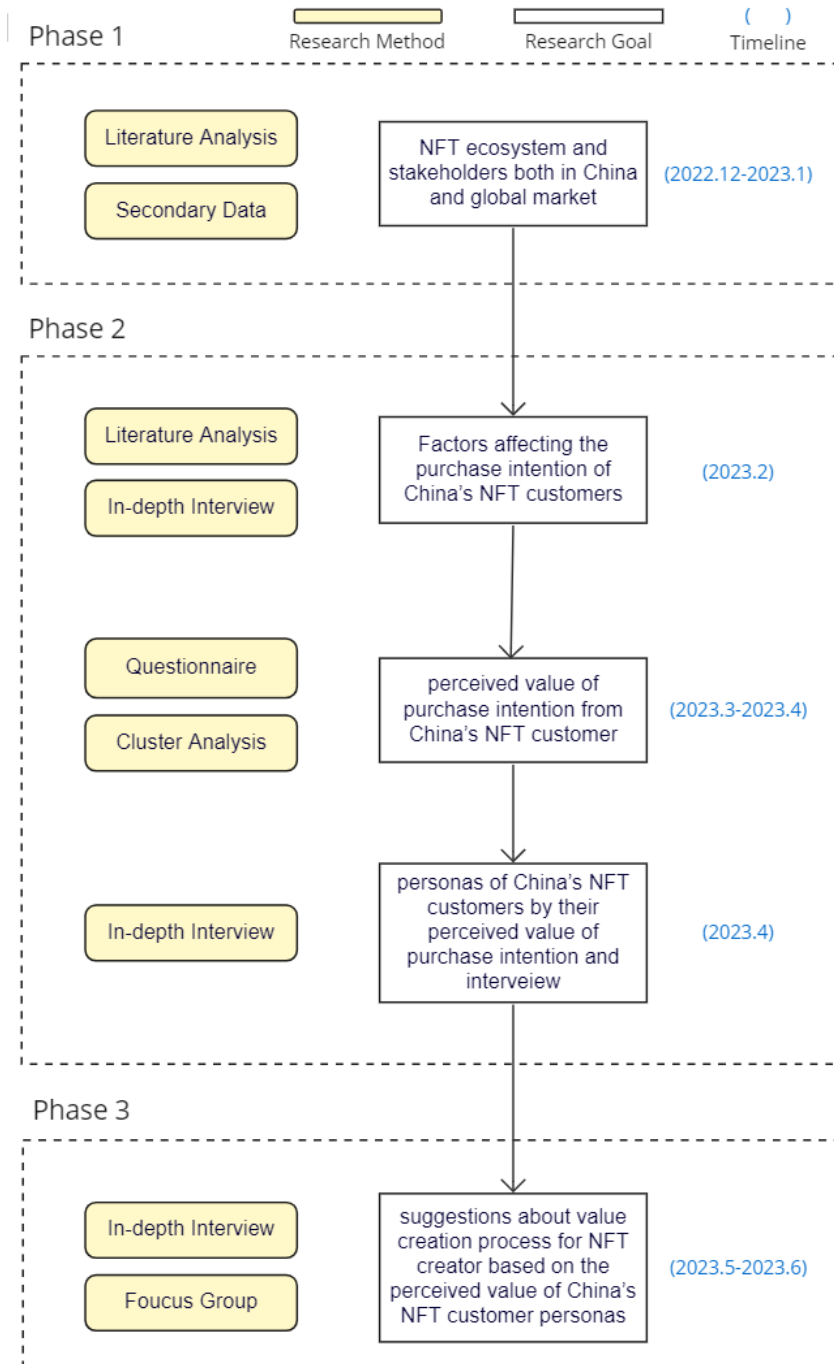


Figure 6. Research framework
(Source: developed by researcher)

The most important goal of phase 2 is to acquire the perceived value of purchase intention from China's NFT customers. Prior to this, the researcher must identify the factors that influence the purchase intentions of China's NFT customers. Depending on the factors used it to produce survey questions, nearly every factor can generate a single question. Then, utilizing an online survey platform for customers to fill.

After receiving the survey data, the researcher will use cluster analysis to analyze it, the method needing more data, preferably from more than 200 respondents. Using cluster analysis, the researcher will classify the factors and give each category a name, which is the perceived value. Personas can also be derived from the survey data by separating respondents based on a number of factors and then conducting interviews with those who fall into particular categories. The meaning of persona implies that you should not view customers as a homogeneous group, as they possess highly distinct qualities. It is also the first time customer personas have been proposed in the NFT academic domain.

Based on the perceived value of China's NFT consumer personas, the final phase is recommending a value creation process for NFT creators. I will conduct interviews with various stakeholders, creators, and experts to get more ideas from them, and I will also apply the focus group method to generate novel, valuable ideas. After the three phases and completion of the research journey, it is hoped that a deeper understanding of the NFT industry's development would be gained, and that the creator will get closer to their customers.

Research Method

Cluster Analysis

We cannot just say that customers are a whole group because that would be inaccurate and less rigorous. Cluster analysis is a good method to use in order to get to know the different persona of customers. Additionally, the method requires collecting a large number of data, which makes it a more scientific practice.

The following steps are always included in the analysis process (Zeng et al., 2008):

- Step 1 Selecting the variables. The variable in this study is what influences Chinese NFT customers' purchase intentions.
- Step 2: Applying cluster analysis to categorize the variables influencing buying intention. The clustering algorithm is designed to make the researched variables as homogeneous as feasible inside a cluster (small within-cluster variance) and as distinct as possible when compared to other clusters (large between-cluster variance).
- Step 3: examining whether the detected clusters can be interpreted. Try to give these clusters a name in this stage and interpret them using some characteristics.

Questionnaire

The purpose of a questionnaire is to collect information from respondents about their attitudes, experiences, and

opinions. Always utilize questionnaires to gather quantitative data from a group of people.

In this research, responses from China's NFT customers are gathered via questionnaires; therefore, the target audience must have purchased NFT at least once, or be familiar with NFT, having knowledge of some market platform and having seen NFT in that market; the greater the knowledge, the greater the preference for respondents. After receiving the questionnaires, apply cluster analysis to determine the perceived value. Before creating questionnaires, obtain questions from a literature analysis and conduct interviews with past NFT customers.

In-Depth Interviews

An in-depth interview is an exploratory, open-ended method for obtaining thorough information from a subject matter stakeholder. Researchers are able to understand the essence of participants' experiences regarding a phenomenon through in-depth, open interviews (Creswell, 1998). The purpose of in-depth interviews as a qualitative research approach is to investigate in-depth the respondent's viewpoint, experiences, feelings, and perspectives. By affording a wonderful "opportunity to step into the mind of another person" (McCracken, 1988). Typically, these types of interviews are undertaken at the start of a bigger research project when there are uncertainties about how to focus the scope of the research or what questions need to be investigated.

Results

Through the results of the questionnaire and the researcher's observations, Chinese NFT customers are broadly categorized into three groups: first, those who buy because of hobby or collecting interest, and those who care more about the aesthetics and design of NFTs. Secondly, NFT users who buy because of investment as the main motivation, such customers care more about the platform size and long-term price upside. Thirdly, NFT users who buy because of speculation as the main motivation, such customers mainly hold NFT for a short period of time, especially prefer to buy the first issue of NFT, and participate in various activities such as NFT airdrop.

Subsequently, interviews were conducted to refine the persona, and it was found that users of speculative groups are usually young, and those who buy because of hobby or collecting interest are usually highly educated.

Discussion

According to expert interviews (platform and strategic analysts), the customer perceive value from the perspective of the NFT platform and industry to help the creator, but also interview some creators themselves. creators can adjust their own strategy according to the target group they want to target. For hobbyists or collectors: the main part they care about is the design, you need to design something more beautiful NFT.

For investors: design stage is also very essential, minting stage is best to issue in limited quantities, in the

trading stage is best to choose a platform with secondary trading for release, if NFT has empowerment, more stimulating investment customer to buy. For speculators: for the trading phase to increase marketing activities, such as airdrop, synthesis, etc., of course, is also to choose a platform with secondary market platform to mint.

Conclusion

The research starts from the consumers and classifies them into three types of personas based on the results of their questionnaires, also got the perceived value behind the three types of personas, and then conducts interviews with experts and creators to get creators' pain points and how to help the creators to better approach customers.

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Sexual Assault Prevention Program Coordinator Interviews: Finding the Galileo Conceptual Neighborhood among University Title IX and Sexual Assault Prevention Programming

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Abstract: Sexual Assault Prevention programming is prevalent at colleges and universities receiving federal funds. Currently, there are no comprehensive, systematic reviews of evaluation research on primary prevention strategies for sexual violence perpetration (Basile, et. al, 2016). Galileo is a novel approach for conceptual analysis for understanding the thinking about Sexual Assault Prevention Training. The thinking of Title IX Coordinators is an appropriate place to begin the steps necessary to improve practice and results. By creating the foundation of conceptual elements using Galileo, the efficacy of sexual assault prevention training becomes achievable. First, the three-stage process of Galileo can be used to recognize the important conceptual networks currently in place in Sexual Assault Prevention Training. That first step is reported here in preliminary form. The findings represent the shared conceptual space of the Title IX professionals at present. The research will assist in forming a strategic plan for helping Title IX Coordinators continue the work of more efficacious prevention training. The authors explain the Neighborhood Concept of the Galileo Approach. This paper reports analysis of 66-15-minute interviews with Title IX professionals. Semi-structured open-ended questioning was used to explore coordinators' thinking about Title IX and important related issues.

Keywords: Galileo Theory and Method; Sexual Assault Prevention Training; Title IX; Conceptual Spaces; Neural Networks.

Citation: Hall, M. & Tella, N., (2023). Sexual Assault Prevention Program Coordinator Interviews: Finding the Galileo Conceptual Neighborhood among University Title IX and Sexual Assault Prevention Programming. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 293-312), Denver, CO, USA. ISTES Organization.

Introduction

Title IX of the Educational Amendments was promulgated in 1972 ("Title IX"), 20 U.S.C. §1681 et seq., which is a Federal civil rights law that prohibits discrimination on the basis of sex in education programs and activities. All public and private elementary and secondary schools, school districts, colleges, and universities receiving

any Federal funds must comply with Title IX (OCR, Dept. of Education, 2021). Under Title IX, discrimination on the basis of sex can include sexual harassment or sexual violence, such as rape, sexual assault, sexual battery, and sexual coercion (OCR, Dept. of Education, 2021). Title IX also outlines a school's responsibilities to address sexual harassment and violence (OCR, Dept. of Education, 2021). The Title IX act has been amended a number of times since. For the purposes of this study, the most important amendment is the Jeanne Clery Act, which reaffirmed the training mandate for schools, colleges, and universities. This study examines the thinking of Title IX Coordinators who are charged with responding and investigating the reported violations of Title IX on their campuses.

Title IX and Clery Status on College Campuses

Under Title IX, Colleges and universities are required to take prompt and fair or equitable action to help sexual assault victims and allow them to benefit as fully as possible from the educational institution's educational degree programs (OCR, Dept. of Education, 2021). One way colleges and universities have approached this work is to establish sexual assault prevention programs on their campuses. While Title IX does not mention sexual assault prevention, one of the important legislative actions does: The Jeanne Clery Act.

While training is mandated under legislation, program evaluations of existing sexual assault prevention programs on college campuses have shown limited or mixed results. Over the past 20 years, and as recently as 2020 (Feldwisch, 2020), numerous meta-analyses have been conducted (Katz and Moore, 2013), (Fischer et al. 2011), (Kettrey and Marx, 2019) across the United States, South Africa and Sweden all with the same objectives of correcting misperceptions of normative behavior, increasing students' likelihood to intervene in disconcerting situations, increasing awareness/knowledge, and becoming empowered to act. RTI International conducted an evidence-based review of 59 of these studies (Morrison, et al., 2004). Results indicated that only 14 percent of the studies reported positive intervention effects at post-test or follow-up, and 80 percent reported mixed results (Morrison, et al., 2004). Davis (2020) says flatly that Title IX and associated Clery Training are no better than misdirected. Jessica Terman (2022) who reports Davis' remarks found in her research using key informants, that there is a strong sentiment among them that results are elusive. Among the difficulties in delivering sexual violence prevention training is what Budd and Frye (2023; p. Conclusions) call a "long standing problem on college campuses" because of social and cultural roots. Given these factors the standard or "check the box" sentiment of training has never delivered needed results.

According to Jennifer M. Gomez, college women experience higher rates of campus sexual violence and what she calls "institutional betrayal" (Gomez, 2022; page 94). Title IX was intended, through its expanded and protective amendments, to protect female athletes and female students, which Dr. Gomez indicates is not happening. The National Sexual Violence Resource Center mirrors Dr. Gomez sentiments in the statistics that one in five college women report being sexually assaulted while attending a university (National Sexual Violence Resource Center, 2015). Additionally, Baldwin-White and Moses offer that College is also the time

when men have the greatest likelihood to commit sexual assault; 23% of college men reported committing acts that meet the definition of sexual assault and 35% reported some proclivity toward sexual assault if they could be assured, they would not get caught (Baldwin-White and Moses 2021; Burgess, 2007). Female college students are also less likely to report a sexual assault and are also more likely to believe that a sexual assault is a personal matter and not serious enough to report (Baldwin-White and Moses 2021).

Azimi, et. al, (2021, p. 46) write that “simply being exposed to prevention programming does not mean that it will translate into intervention behavior – and in fact makes it less likely the individual will intervene under certain conditions.” They go on to note sexual violence and its prevention should be part of the content of training in the Title IX space. The omission of such information is what they term a “weakness” in the training. For example, Katie M. Edwards, et. al, write about their research into sexual assault prevention programs. Their article is entitled “Measurement Tools to Assess Relationship Abuse and Sexual Assault Prevention Program Effectiveness Among Youth.” Their tools are to be used for evaluating Sexual Assault Prevention Programs. The tools date from 2018; indicating the availability of such tools has had limited adoption or have been overlooked entirely.

An article written Adrienne Baldwin-White and Karen Moses entitled “A Multisession Evaluation of Sexual Assault Prevention Education: The Unique Effects of Program Participation” (Baldwin-White and Moses, 2021) found even among several programs with multi sessions results were no better than “mixed.” None of the programs evaluated produced higher scores on key tests and scales. While these specific resources show limited results, the literature is replete with other such reports. Sexual assault prevention work has been reported in considerable quantity in the literature. Using the search terms, **sexual assault or sexual violence and prevention or intervention**, produces 34,497 results; using the dates for publication as 2018 to 2023 still produces 15,234 results. The substantial quantity of literature results indicates researchers in the field are interested in sexual assault prevention efforts despite disappointing outcomes already published. Naturally, it is valuable to prevent violence or assault before they happen, thus the need for training. According to the CDC, Public health underscores the importance of primary prevention, and preventing sexual violence before it occurs (Basile, et. al, 2016). Compared to other types of violence (e.g., youth violence) and other public health topics (e.g., HIV prevention),” the evidence base for sexual violence prevention is significantly less developed. The proposed solution is to continue to build the evidence base of what works to prevent sexual violence by investing in rigorous evaluation of promising prevention approaches (Basile, et al. 2016). Efforts to prevent sexual violence before it occurs (i.e., primary prevention) are “increasingly recognized as a critical and necessary complement to strategies aimed at preventing re-victimization or recidivism and ameliorating the adverse effects of sexual violence on victims (DeGue et al. 2014).”

Mental Conceptual Space

The delivery of sexual assault prevention training under Title IX is a complex mental exercise. Each person

exposed to the training brings with herself/himself/themselves a mental model of concepts formed from experiences, cultural messages, family relationships, and many other influences on their thinking. Consequently, the mental model of sexual assault topics/concepts may likely be already present in a person's mind and cognition formed before any training occurs. This conceptual space may not be easily transformed in a way conducive for having the training lessons fully absorbed.

Pierce began working in the area of mental models in the late 19th century. His definition of "inwardness" is germane to the foundations of mental models. Pierce noted that a person's inwardness knows no boundaries or limits. In fact, he formulated the idea of inwardness (Semetsky, 2005, page 665) which he postulated had dimensions which could be expanded, particularly in cultural content. Others have followed with further research advancing the understanding of mental models (see Johnson-Laird, 2010).

Galileo Theory

The inwardness feature of mental models has a large impact on the Galileo Theory approach being used in the research reported below. The inwardness of Pierce is the self in Galileo. The self, according to Woelfel (Woelfel, 2022, p.753) is always present in the conceptual space of any individual. This phenomenon is in Galileo Theory because conceptual space within the individual is corporeal. Thus, thoughts are generated in a person's body and belong in that person's conceptual space which form a mental model.

This understanding is fundamental to Galileo since Woelfel points out Western Civilization has not fully accepted that thoughts are corporeal. The philosophical underpinning of this limited reasoning dates from as early as Aristotle but, again, according to Woelfel, continues today. Woelfel writes "Abstract, immaterial concepts have no "place," i.e., location, in Aristotle's world, which is still, for the most part, the cultural underpinning of contemporary Western civilization (Woelfel, 2022, p. 264)." Hence space as such has little meaning in psychological or cultural processes.

Importantly, the issue of concepts being corporeal means they are in the thinking space of individual humans. Thus, the space they occupy is subject to spatial coordinates. With such coordinates, concepts can be mapped in the conceptual space they occupy. More, importantly for Galileo Theory, that space can have "vectors" in it. Vectors can be plotted, and vector coordinates can be used to determine distances within that space between and among concepts. Woelfel credits Young, Householder and Torgerson with developing the early scaling methods and mathematics to determine distances among concepts in the space of cognition or mental maps. (Woelfel 2022, page 265).

Given all of the foregoing, the Galileo mental map is generated with clusters of concepts found in the nodes of individual brains connected by synapses. Concepts are actual neurons. The connections among brain nodes are based on the Hebbian Rule that neurons that fire together wire together (Lagani, et.al., (2022, p. 6503). Donald

Hebb (1951) developed the idea that the brain is equipped in this way to allow all humans to learn and to remember. Learning is a base element of any single person's mental map.

With the neurons connected in this way, humans produce concepts in subsets as they experience the world around them. Resultantly, these experiences are formed into neighborhoods, as it were, of concepts constructed from experiences such as reading, watching TV, listening to music, traveling, using the internet, and other human interactions with the world around them. Since the mental map is formed into any individual's conceptual neighborhood, the corporeal thought of the self is present in all the neighborhoods. Those neighborhoods are formed by the neurons and the connecting synapses, because oneself is always present in the human mind.

Galileo Method

All of the Galileo structure among concepts in the mind lend them to a method for understanding what they specifically are in any neighborhood and then on to a conceptual mapping process to generate the coordinates of those concept in the mental map or conceptual space they occupy. This exploration of concepts or neurons can be accomplished through Galileo analysis. Galileo analysis begins with understanding the neighborhoods of concepts shared by individuals based on a generally defined set of ideas formed into questions. Those questions are open ended and intended to generate a conversation-like interview. Those answers are the entryway into the conceptual shared space among those with the neighborhood. It is important to distinguish this approach from the more traditional statistical measurement used in much of social science. Importantly, as Woelfel points out, that research is based on Euclidean space not conceptual space. The distinction is important to understanding the analytic direction Galileo takes and the methodology to do so.

Once the open-ended questions' answers are transcribed, the Galileo Catpac analysis can begin. The Catpac analysis uses an algorithm to sort through the transcribed answers seeking patterns within the questions' and across the answers to those questions. Once that process is completed, dendrograms can be produced; one for each open-ended question. In order to process the transcribed text file in this way, Catpac performs as a neural network itself and can find where the neurons are firing together, in the Hebbian way. The resulting dendrograms represent the wiring of the text file neurons arising from the questions posed to the respondents who were engaged to answer them.

Since the Title IX coordinators and their deputy coordinators are the lynchpins of the Title IX and Clery Act requirements, it was determined that they would have the most broadly formed conceptual space for Galileo analysis to explore. For the Title IX conceptual space exploration, a set of 5 open-ended questions was used. In Galileo Methodology it is best practice to use 5 to 7 questions for the dendrogram beginning phase of the method.

The questions used in the Title IX beginning Galileo phase were:

1) When you first became involved in Title IX work, what were the results you were expecting to see?

Prompt Question: What brought you to the work?

2) What principles do you think should be present in Title IX Sexual Assault Prevention training?

Prompt Question: What do you think is missing?

3) What do you think are the reasons Sexual Assault Prevention trainings have traditionally shown limited or mixed results?

4) What training or expertise should a Title IX trainer have?

5) What do you think is the future of Title IX Sexual Assault Prevention training?

Prompt Question: Are there any final thoughts before we conclude?

The questions and the prompts are intentionally broad in order to elicit responses generated by the Title IX key informants' thinking. That thinking is the location of the Galileo Conceptual Space or neighborhood. That space is where the Title IX concepts exist in the key informants' mind.

The Galileo space can be enlarged from individual study and by communications about and for Title IX from government sources, from online magazines, from Title IX training, from Title IX professional associations, and, certainly, from one Title IX professional to another. Information from these sources is the result of conforming information developed by use of Title IX ideas or concepts by evolving interaction among Title IX professionals and the Title IX information domain. Finding this domain was the aim of the study reported below.

The approach taken for exploring the conceptual space of Title IX, was derived directly from 66 Title IX coordinators, deputy coordinators, and women's centers directors on college campuses. The transcribed interviews, without attribution (anonymous), were then submitted to Galileo's Catpac software algorithm for analysis. The algorithm generates dendrograms for each of the 5 questions. It also produces a word count of the most frequently occurring words, concepts, and neurons. Since Catpac is a neural network, it is well suited to the task of finding neurons firing together.

The analysis also included a split half analysis of Question #2's dendrograms. This step was taken to determine if the patterns found in the dendrograms were stable and, therefore, dependable for surveying the Galileo conceptual space among the 5 questions used.

Procedures

The Catpac software is a neuron finder. It operates using a window, which can be set to larger or smaller sizes. The window "reads" the text from left to right within the window and moves on to the next text series and reads the text the same way, and so on. Understanding the data in a dendrogram means, a word is a neuron. Once the

word/neuron is assessed the neuron becomes active so that connections can be established just as the human mind works to wire neurons together. The words that are close to each other in the text are saved to the Catpac memory.

The Catpac software can be set to go through the text more than once in this way. Going through the text is called a cycle in Catpac. More than one cycle can be used, but caution is advised in taking this step (Catpac Manual, Version 2.0, pg. 24). As a cycle moves through the text, neurons are “turned on” and once on can activate other neurons as in the human brain, except the brain does this work in parallel. Catpac cannot do so since it is activated in a computer not a human brain. Adding cycles will update the neuron connections but if there are too many cycles used all neurons are on all the time and no real connections are available. The default is 1 cycle and Woelfel’s Catpac manual reports 1 cycle is useful for most analyses of texts.

The Transfer Form is associated with the Threshold and Learning operations in Catpac. The transfer is in the mathematical form of -1 to +1 in the data results shown below. The -1 to +1 function is how the learning function and the threshold function operate as the Catpac Window passes through the text file. It is nonlinear in its mathematical mapping of the neurons once turned on in the text.

In the human brain, the neurons move electrochemically and, consequently, are not linear. Catpac can use 4 types of transfer function forms. The form used in the results shown below is sigmoid. A sigmoid function is an S transfer form mathematically (Catpac Manual, Version 2.0, p. 23, 1998; Han et al, 1995). The sigmoid S curve is preferable in the Galileo transfer here, since conceptual space is not flat, but rather curved.

Catpac also has a Clamping function. The clamping function is to allow a neuron, once found to remain on for finding additional connected neurons. The Clamping operation is a yes or no choice. Once on, Woelfel writes clamping is like putting a reminder note in front of you to pay attention to words as they appear on the note (Catpac Manual, Version 2.0, p. 22-23, 1998).

The Threshold function in Catpac is a “transfer function” (Catpac Manual, p. 24, 1998). The Threshold value is best set to 0 for the first pass through the text data. The 0 allows a neuron to remain active to increase the chances of finding connected neurons. The Threshold is associated with the Catpac Learning Function to strengthen the connections found among neurons. The learning rate is set at a default of .01. Moving the value higher makes Catpac learn more rapidly.

Descriptive Statistics

The total number or N of the key informants was 66. There were 51 females and 14 males. One participant identified as non-Binary. The years of experience among the interviewees was 11.22, with a standard deviation of 7.27. The standard deviation represents the average number of years among participants. The mean age of the

interviewees was 45.20, with a standard deviation of 11.96. Participants reported delivery methods for the trainings available under Title IX at their respective institutions. There were 59 hybrid options (a combination of in person and online), 4 online only offerings and 3 in-person delivery methods. There is no Galileo geographic requirement in gathering text data from respondents. However, the researchers wished to be able to recruit participants by indicating their responses would be part of a nationwide research project. The number of unique states was 24 in this dataset.

Word Count and Dendrograms

The total word count for the “raw corpus data” for all 5 question responses (Woelfel, 2022, page 364) was 15,159. The total number of unique words was 247. Question 1 had 50; Question 2 had 47; Question 3 had 50; Question 4 had 50, as did Question 5. The unique words number default for the first pass at the text data is 50. That is the number for the 5 questions reported here. For more refined analysis, the top 15 to 30 would be the optimum to work with (Note: the neurons which fire together, wire together). The more refined analysis will come once the N reaches 100. Later Catpac scanning of the interview texts will use the lesser number of unique words to clarify the space. In Galileo analysis stabilization of most conceptual neighborhood space begins to occur at approximately 50 respondents. The split-half procedure shown below (Question #2) seeks to determine for the two halves, a similarity of neuron patterns. However, the absence of stabilization in the text corpus at 50 respondents does not necessarily mean there are no patterns resulting. The absence of stabilization could mean there are not yet enough respondents for stabilization to appear. In fact, the researchers continue to collect more interviews, in part, for this reason. Moreover, the mental maps of individual Title IX coordinators could be incompletely formed in such a complex and changing policy and procedures driven conceptual neighborhood. Under such circumstances, stabilization of neurons/concepts becomes more difficult to achieve.

Dendrograms show the proximity of similar objects. The Galileo dendrograms depict patterns using the special character of a “pyramid” or “hat.” The concepts formed by the dendrogram in its entirety are the neighborhood of conceptual space formed by the responses from the Title IX coordinators. The heights of the pyramid symbols indicate the clustering of the concept from within and across all question responses from the interviewees. The tallest of these pyramid patterns would represent the clustering of Title IX concepts formed from the key informants’ interview responses; thus, showing the neurons wiring together. The split half results from Question 2 indicate the conceptual space markers have not yet become stable. The result can nevertheless, be described and explained. Figure 1 is the “top” of the split-half analysis of Question 2. Figure 2 is the “bottom” half of Question 2. The 66 respondents allowed for two groups of 33 interviews. As both figures show there are shared concepts in both halves. For example, both have Title and IX. They have different dendrogram positions and dendrogram “heights.” Further, both dendrograms contain words which are important to the Title IX conceptual space. Words such as think, life, and Title IX are wiring together in both halves of Question 2. Terms of this kind, connote information about what Title IX work requires among the key informants. The top and bottom halves of Question #2 contain the same 15 terms. These terms are shown below in Exhibit 1.

Exhibit 1

Shared terms in top and bottom of question #2

Need(s)	Know
Student(s)	Training
People	Consent
Talk	Important
Sexual	Process
Campus	Faculty
Work	Right
Time	

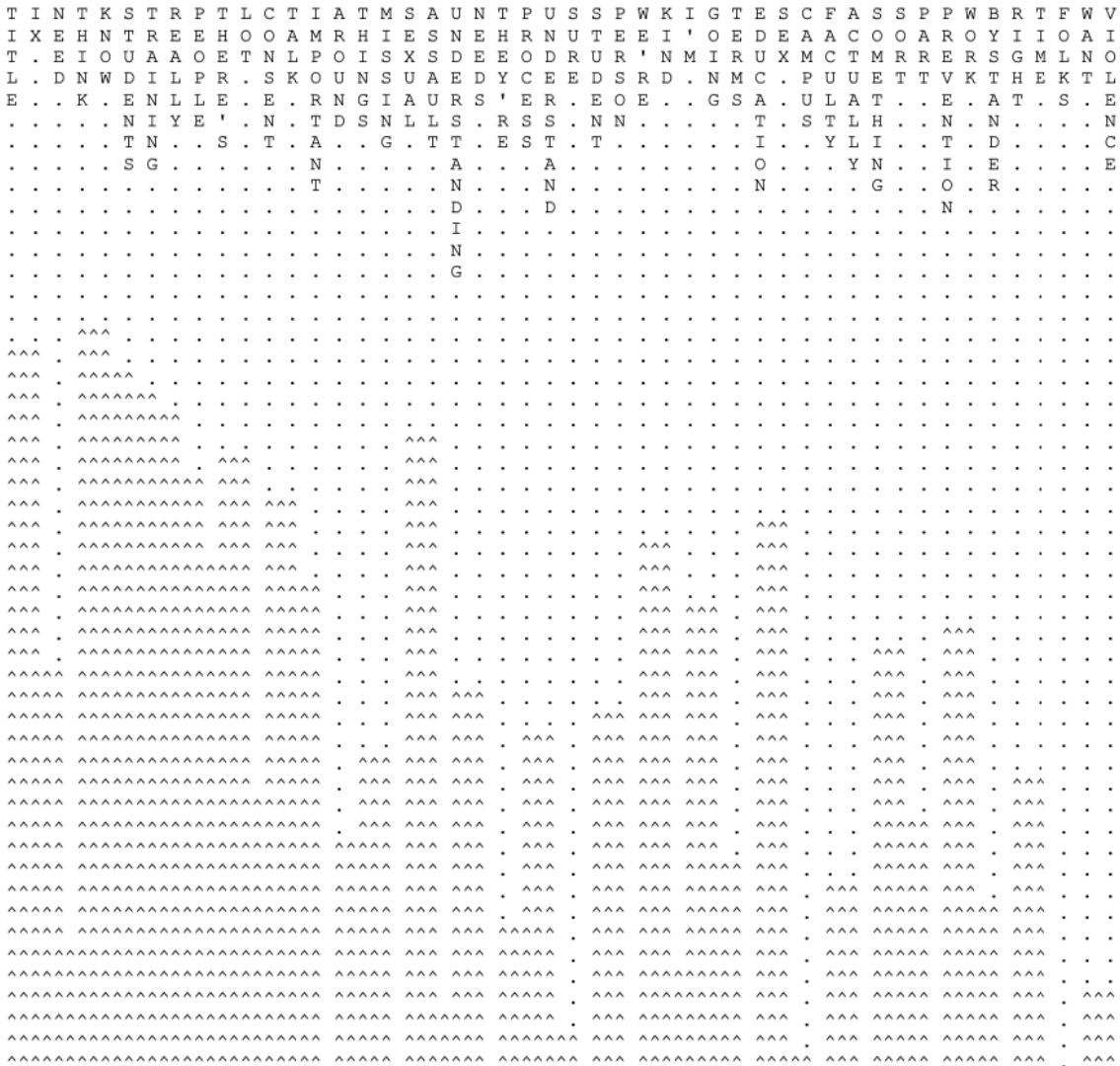


Figure 1: top half of question 2 split -first 33 respondents

The presence of these shared terms indicates a movement toward stability in the conceptual space. The presence

of these words also points to the need to refine the analysis using 15 to 20 unique words, enabling Galileo Catpac to create more coherent wiring among neurons for dendrogram representation.



Figure 2: bottom half of question 2 split - second 33 respondents

Question 1: When you first became involved in Title IX work, what were the results you were expecting to see?

Prompt Question: What brought you to the work?

The word count for Question #1 was 2,685. Title was the most frequently occurring word. The second most frequently occurring word was IX. The view of the dendrogram would be best understood as looking out a window onto a “city scape” with buildings in the neighborhood. The taller buildings while distinguishable from the shorter buildings simply shows the contours of the neighborhood.

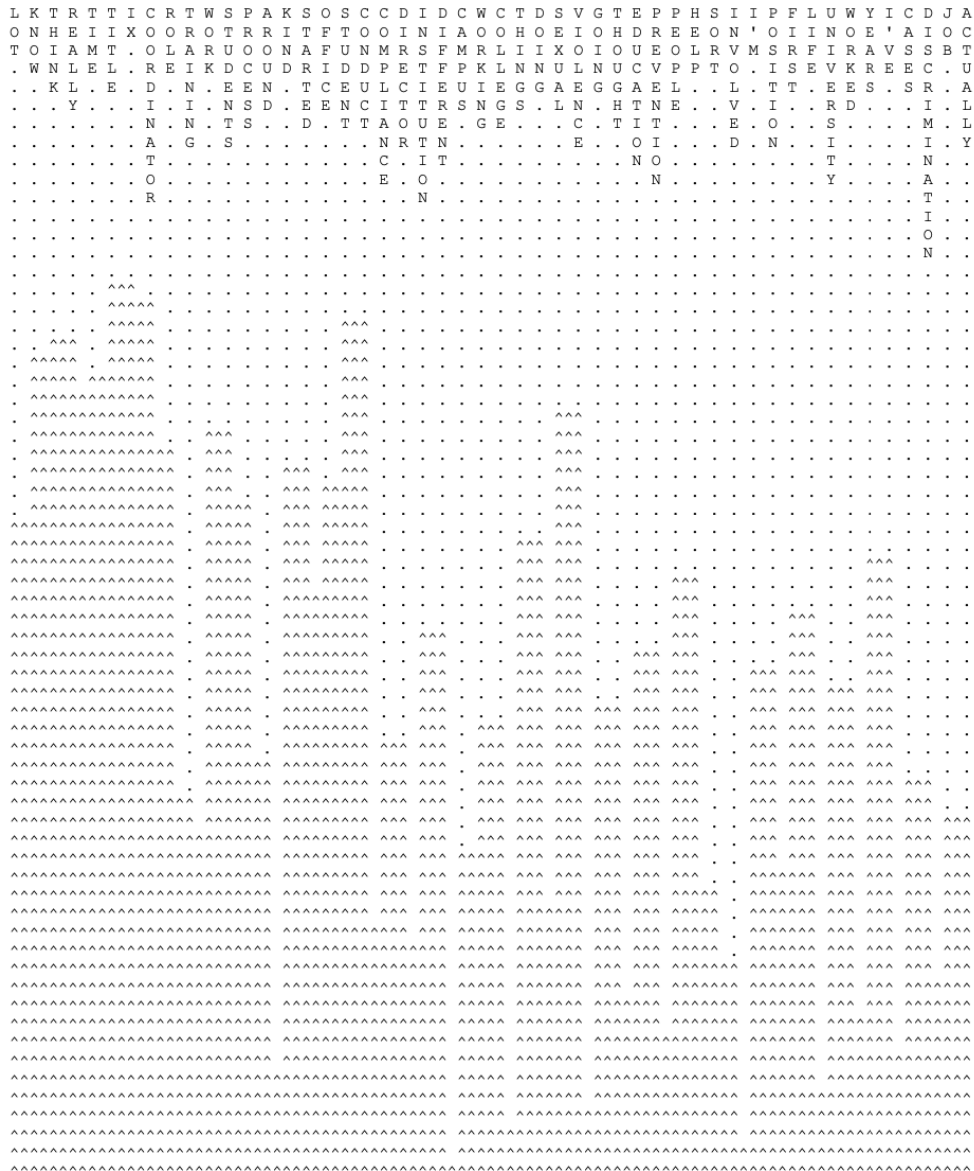


Figure 3: bottom half of question 2 split - second 33 respondents

The absence of syntax in the dendrogram does not mean the word or words are not meaningful on their own. When neurons assigned to the words are active, the connective capacity increases. As neurons move, they in turn trigger other neurons which may not appear in the Catpac dendrogram “window” (Catpac Manual, Version 2.0, p.22, 1998).

The tallest pyramid patterns show that Title and IX are together as indicators of the conceptual space. The next tallest pyramids are Student and Conduct. Thus, these terms are the most active neurons in the emerging conceptual space formed by Question #1. The question also asked coordinators how they came to Title IX work, along with a prompt about their respective expectations for their efforts. Another pattern pair is student and conduct. The elements here would point to the importance of what happens in Title IX situations as being

associated with the students and their behavior as a key element in the conceptual space.

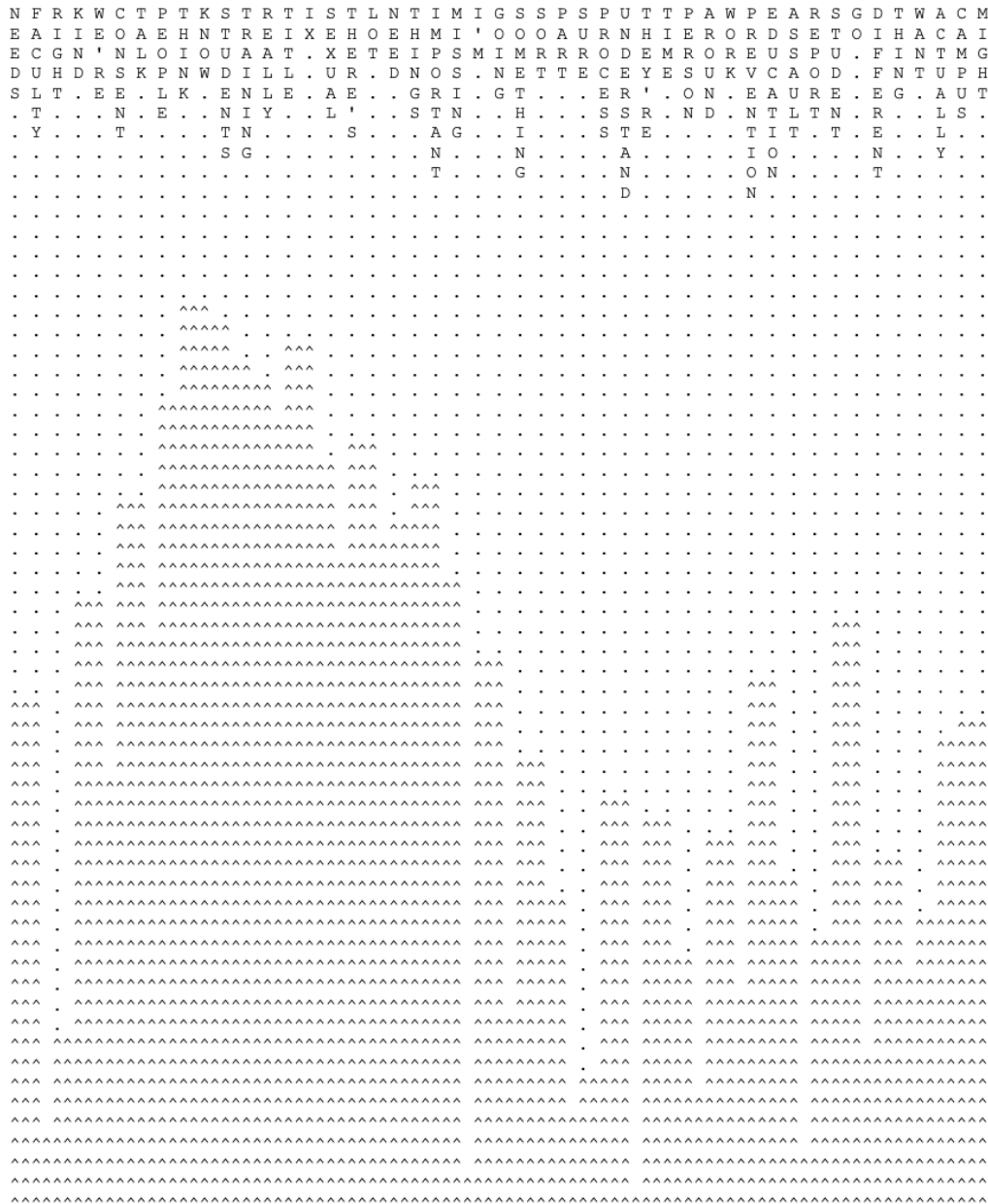


Figure 4: full dendrogram for question #2

In the dendrogram for Question #2, asked about the most important topics and what areas of prevention might be missing in the Title IX training at their respective institutions. Title and IX are once again prominent, but importantly the space is being expanded to add Think and Training. A similar “height” pattern is found between the concepts sexual and assault. Here again the conceptual space is being outlined by the elements most often repeated in the interviewee responses. The dendrogram for Question #3 adds to the thinking space with the appearance of the terms People, Think, and Prevention. All these elements are part of the shared conceptual space and thus are firing together as neurons.

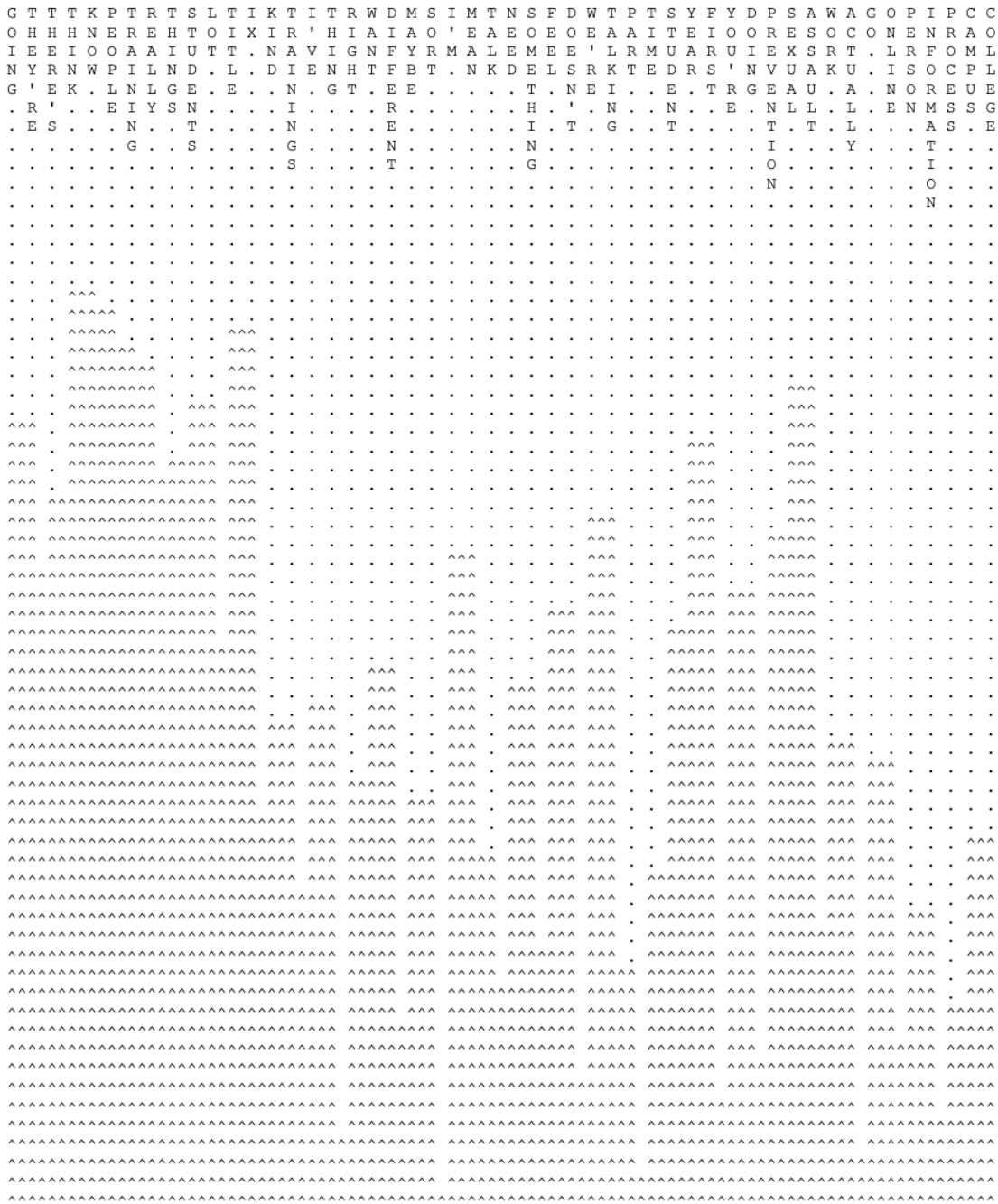


Figure 5: Full Dendrogram for Question #3

The pyramid of concepts for Question 2 brings together the ideas of People, Think, and Know; Training and Title IX being nearby. This clustering forms a neural pattern revolving around the Title IX neuron. Resultantly, the neurons form a firing pattern of shared higher frequency of occurrence. Figure 5 shows the dendrogram for Question #3.

Question #3 generated a clustering of Thinking, Knowing, and People. Title and IX are also part of the

clustering as is sexual and assault. Notably, Prevention appears in this dendrogram. The question posed concerned the respondents' answers as to why there are such limited results found in the literature of Title IX Sexual Assault Prevention training.

Question #4 inquired as to what skills and expertise should be used to develop and deliver effective Title IX training. The dendrogram results point to the terms Need, Think, Know, and Training. Know and Training are "clustering" together in this instance. The term Student also appears as a concept. Figure 6 shows the full dendrogram for Question #4.

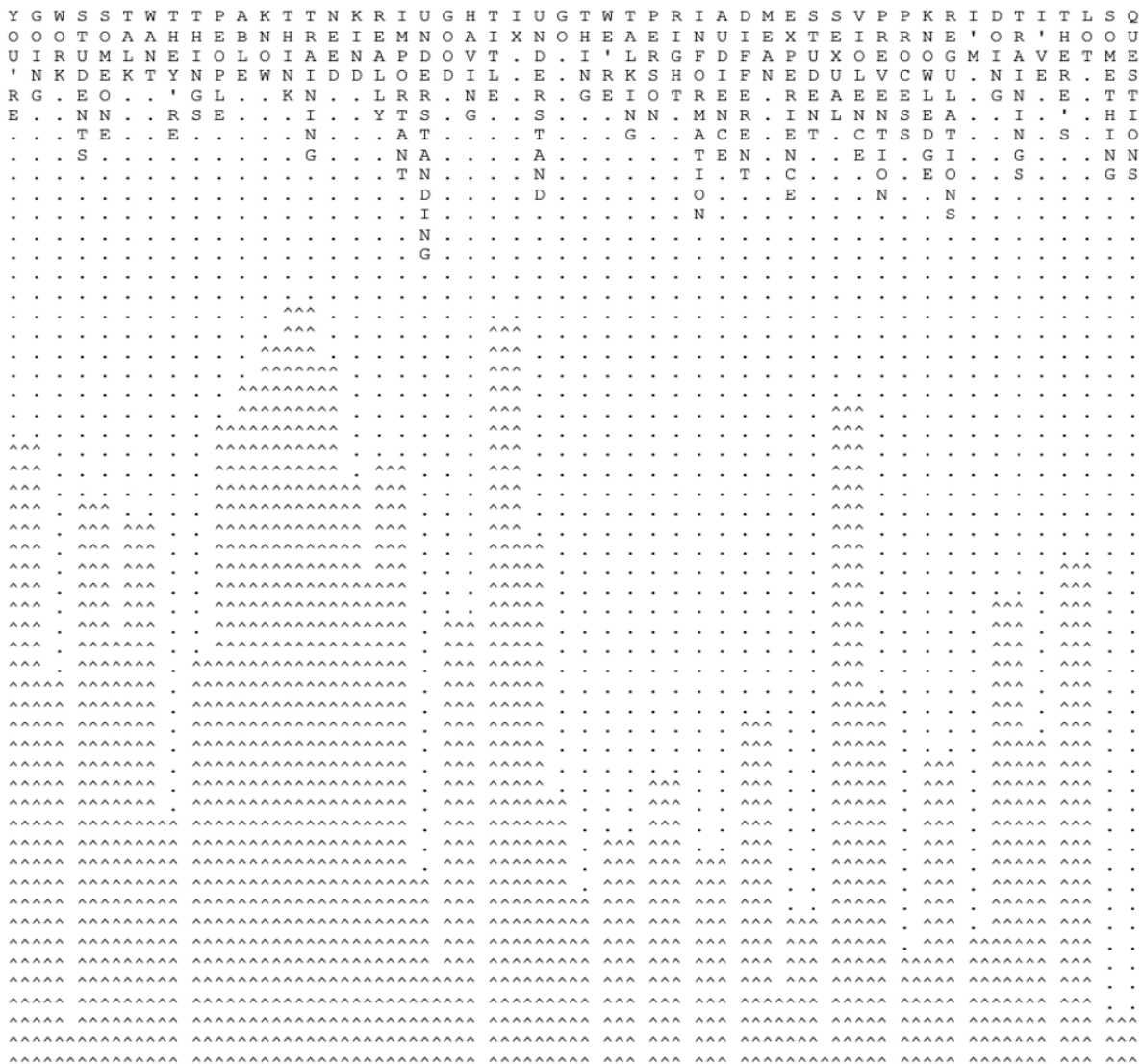


Figure 6: Full Dendrogram for Question #4

Finally, Question #5 represents the respondent's sense of the future concerning Title IX. The dendrogram shows that the concepts of Think and Know are present. Additionally, Changes, Sexual, and Prevention appear as a smaller cluster.

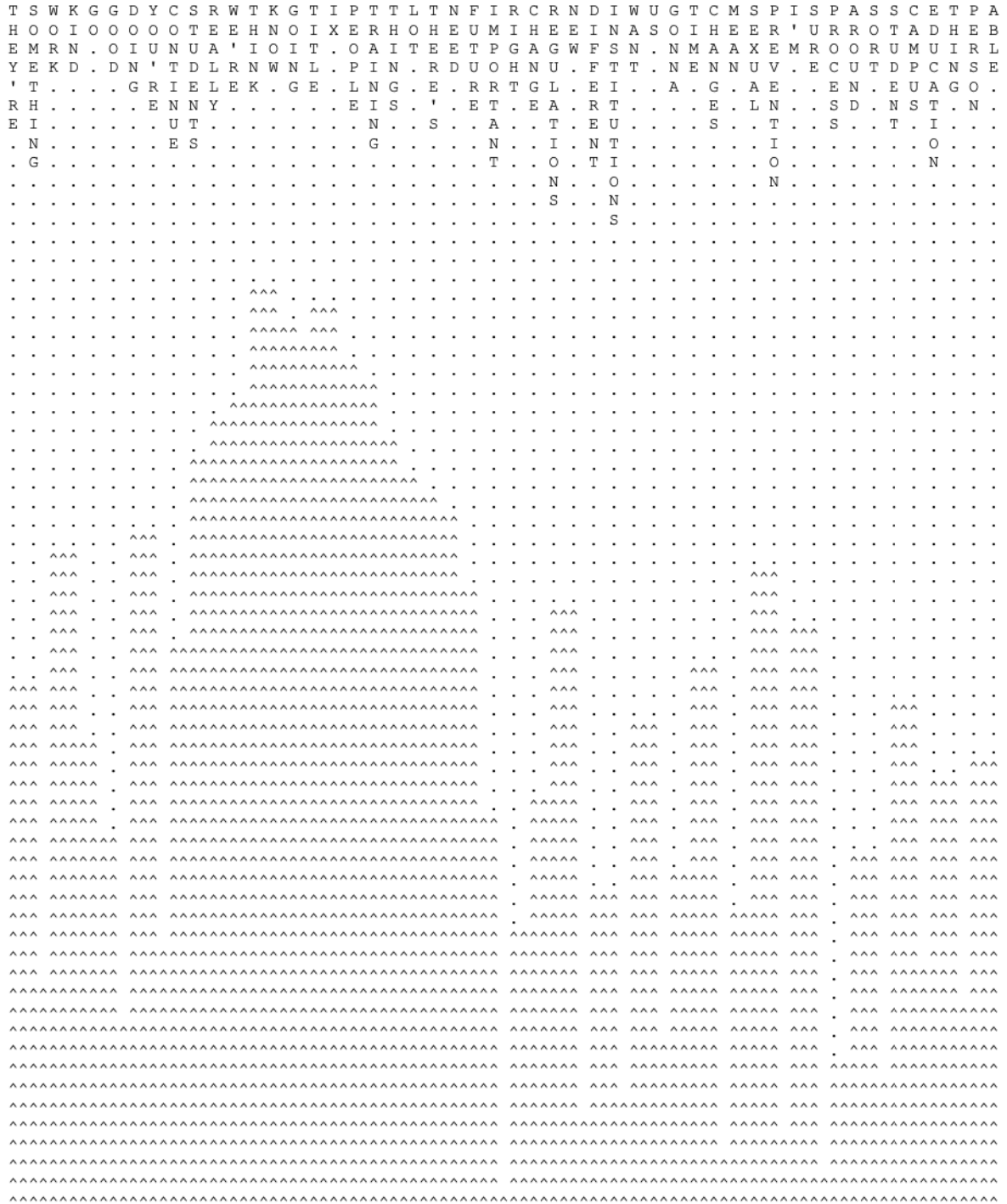


Figure 7: Full Dendrogram for Question #5

Discussion

It is vital in examining the dendrogram results that the words are not being interpreted as having meaning imposed on them by the viewer. Second, the patterns uncovered are not conversational in nature but rather they are formative of a thinking space about the important elements needed to make the community of shared

concepts. In other words, the concepts shown across the dendrogram do not, nor can they be made into sentences. Consequently, none of the results are informative of meaning in the conceptual space. Rather, they illustrate the thinking concepts forming the conceptual community.

The results presented here are not considered final. First, the number of interviews will increase to at least 100, in order to continue to stabilize the dendrogram patterns. Second, the current results are the raw corpus of the data. Woelfel uses this terminology in his Galileo research because the phrase reinforces the individual nature of the data and that the concepts arising are within the respondent's mind. The concepts do not lie beyond the individual. The individual does not somehow "pick them up" or collect them as if he/she/they were simply gathering ideas without a purpose. Carcamo-Ulloa, et al (2022, p. 3), also apply the corpus term to work they have done with textual file analysis.

Thirdly, the concepts here are surrounded by deictic terms. Those terms include pronouns, prepositions, contractions, adverbial terms, and spatial or locational terms like "here" and "there." The Galileo Catpac software has the capability to filter these terms from the raw data. That step will be taken once the number of interviews reaches 100.

Fourth, once the 100 interviews have been transcribed, the Galileo analysis will move to using the filtered and more clearly specified set of shared conceptual definitional spaces. This step is taken to generate a set of paired concepts mined from the 5 question responses. Those pairs will be used to create a distance magnitude estimation survey. The paired comparison survey for distance is illustrated below:

If chair and farm are 100 units apart how close or distant are the following:

Chair	Farm
0	100
Title IX	Sexual assault prevention
0	100

The Distance Magnitude Estimation process begins by displaying for the respondent a base pair to use as a conceptual measuring device for judging distances or differences between the paired comparisons emerging from the refined definitional space. The base pair is not to be polar opposites. Instead, the base pair will represent a difference which can be used across one hundred units or more. This configuration of the base pair allows the respondent to judge how far apart or, different, the two items of the pair are from one another.

It is the Distance Magnitude Estimation (DME) step following the CATpac analysis which becomes the mechanism to determine where the final concepts exist in the thinking space called Title IX Coordinators. The result from that measurement step will be a three-dimensional map (as shown above) which will show the elements of the conceptual space based on the coordinates in the space. The map will show distances among and between the concepts. The concept of "yourself" resulting from those coordinates will also be present. Yourself

is the concept representing the individual which exists in all conceptual communities. Once in place in this way, the data reaches the stage of becoming a mental model of a system of information according to Woelfel (Woelfel, p. 276). Mental Models of this kind change as the information in the surrounding environment appears and results in an alteration of the mental map. Such is the conceptual neighborhood of Title IX. Since the researchers reporting here have not yet reached the DME point, an illustration from another study (Figure 8) will demonstrate the point.

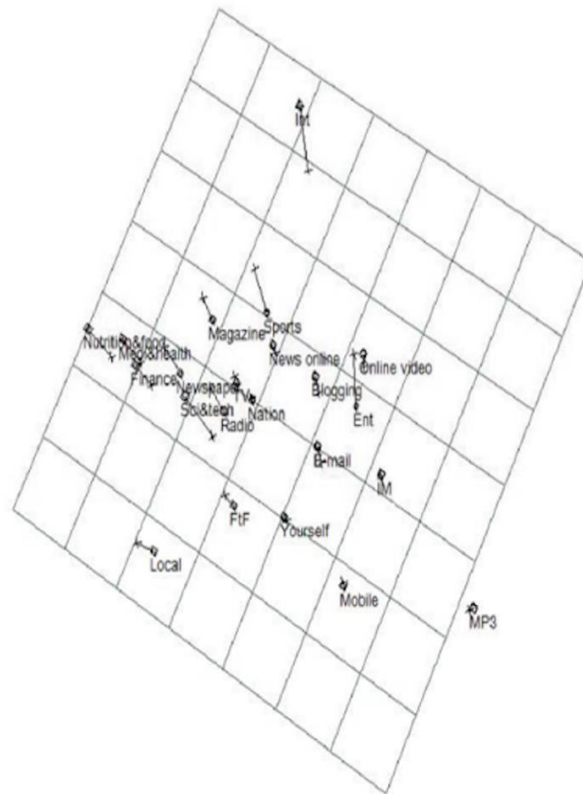


Figure 8: Distance Magnitude Three-Dimensional Map Example

Conclusion

While the Galileo Theory and Method are on display here, what is presented above would be incomplete without addressing the full scope of the research to be completed and only just begun. Galileo Theory and Method were intended to be applied to practical uses in communication and marketing; equally the case here. The first order dendrogram results exhibited above are only the beginning of a multistage process. The final stage of the multistage process shown in beginning form, is intended to culminate by improving practice. With the map results, such as that illustrated above, the Galileo Method turns to moving the conceptual objects in the space where they exist to make the concepts more useful to Title IX coordinators. The movement in space of this kind is a message vector or, more likely, a number of message vectors. Those messages hinge on the

measurement stage to come and on to the map resulting.

Acknowledgements

The authors would like to acknowledge the contribution from the Roger Williams University Provost Research Fund grant. The authors would also like to thank Scott Danielsen for his timely and conscientious work applying the Galileo Software so necessary to the results.

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Towards a Rational Society: Scaling Argument Mapping in Higher Education

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Abstract: Argument mapping (AM) is the activity of plotting a diagram representing the logical connections between evidence and the claims it supports, with boxes connected by lines. AM can massively benefit students and their communities. Not only is it about twice as effective at improving student critical thinking any other method and enhance student math, science, and writing skills, thus demonstrating its use in an academic setting; there is also reason to think AM represents a larger commitment to democratic education. Improving critical thinking *en masse* opens up the possibility of improving democratic health by improving democratic attitudes such as tolerance and open-mindedness, epistemic confidence, etc. However, AM's incompatibility with federal accessibility standards hinders its widespread adoption. In this paper, we review the research on AM, critical thinking, and the benefits thereof. We then argue that a still-developing web-based application, Argumentation, could make AM accessible and thereby unlock the method's benefits for students and their societies. Finally, we identify some avenues for further research that an accessible AM app would open.

Keywords: Argument Mapping, Critical Thinking, Democratic Education.

Citation: Surovell, J. & Poston, Z. (2023). Towards a Rational Society: Scaling Argument Mapping in Higher Education. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 313-317), Denver, CO, USA. ISTES Organization.

Introduction

Most educators would say that helping students develop critical thinking skills is a primary goal in higher education. However, we are not achieving this goal to the extent that we could. This paper will argue (1) that the widespread adoption of argument mapping in higher education would solve this problem and (2) to get argument mapping widely adopted, it needs to be brought up to federal accessibility standards and made easier to teach. Finally, (3) we'll discuss how we've taken some major steps towards achieving these goals within the Argumentation web-based application.

In the United States alone, we spend hundreds of billions of dollars on higher education (NCES, 2022). And one

of the main promised returns on this investment is improvements in student critical thinking. But despite these billions, we see only modest achievements in those critical thinking skills: we see a increase of 0.3 in the effect size of the standard deviation in critical thinking gains with a first semester in college versus no college (Huber & Kuncel, 2016) and a 0.4 standard deviation increase from a semester that includes a critical thinking course (Abrami et al, 2015). Argument mapping, then, can vastly improve higher education's critical thinking outcomes, taking the gains from small to modest.

Argument mapping is a diagrammatic representation of an argument. The claims are represented with color-coded boxes and the logical relations between those claims as lines therein. You add your "Main Contention" at the top with reasons for or against (which have their own reasons for and against, and so on and so forth) branching out like a tree underneath. Argument mapping has a substantial visual component, which helps students understand complex arguments (as noted by Tim van Gelder, 2015). We believe its tactile component--dragging and dropping and navigating--could similarly contribute to understanding and learning for blind students, though research on this hypothesis is needed.

There exists now a substantial body of research, including randomized controlled trials and meta-analyses, attesting to the hypothesis that a semester of college with an argument mapping course leads to about twice the gains in critical thinking as a semester of college without (Tim van Gelder, 2015). Not only this, argument mapping forces students to confront "cognitive and interpersonal challenges," resulting in "more deliberate and fair-minded approach[es] to understanding them." (Kaeppel, 2021) Some evidence goes as far as to suggest better overall argument comprehension (Dwyer et al., 2010). We also see better writing (Cullen et al., 2018), scientific reasoning (Murungi & Hirschheim, 2022), mathematical reasoning (Indrawatinigsih et al., 2020), and better recall of course content (Eftekhari & Sotoudehnama, 2018).

What makes AM so effective? Dwyer et al. (2010) lay out three explanations of AM's efficacy: first, AM involves dual visual-propositional modalities and this enables the learner to process information more efficiently; second, learners bring "Gestalt grouping principles" to bear on argument maps and this helps working and long-term memory retain the map's content; third, and finally, AM organizes content hierarchically and this, too, helps content enter into and stay in memory. A fourth explanation is that argument mapping is particularly amenable to scaffolding and this enhances learning. A typical critical thinking textbook introduces arguments with multiple premises and intermediate conclusions in a single chapter; argument mapping textbooks give each of these difficult topics their own chapter.

The main barrier to argument mapping's widespread adoption is accessibility standards. Argument mapping is a diagrammatic method. A blind person can't draw an argument map with a pencil and paper nor can they use any of the existing digital applications. The US, EU member states, Canada, Australia, and many other countries have laws requiring that college courses be accessible to students with disabilities. Because existing argument mapping applications aren't accessible, and because creating a separate accommodation for blind students isn't feasible, argument mapping has remained at odds with these disability laws. And this has held back institutional

support for it. Certainly, it can't be commended as a "best teaching practice" when it doesn't meet standard legal requirements.

We believe this challenge can be met. We're developing a web-based application, Argumentation, which will be fully accessible. Users will be able to create and edit maps using either the mouse or key commands and a screen reader. We're optimistic we can achieve full accessibility because we've designed the app using principles of inclusive design, like "no decision for us without us." Specifically, we've consulted with blind people, including blind accessibility experts, about our major design decisions. We've also, as a company, undergone significant accessible design training and research. And, finally, we have commissioned a third-party accessibility audit. This has provided us with a concrete roadmap to meeting all WCAG standards before the Fall 2023 semester.

We'll need other materials, in addition to the app, to make argument mapping courses accessible. In particular, existing argument mapping textbooks are full of images of argument maps that the blind have no way of engaging with. We're writing our own textbook that will include links to accessible maps in the Argumentation app when discussing examples. The textbook is intended to help assist in the development of an argument mapping course (either wholly or supplementally). We've also written a "quickstart guide" that will explain how to give accessible lectures, and create accessible videos, about diagrams like argument maps.

Importantly, Argumentation is not just an accommodation for blind students but, rather, is designed to make argument mapping more user-friendly and pedagogically effective for all students. It is not an either/or business, but a both/and one. We hope that the app will, therefore, "open the floodgates" to argument mapping, ideally making it the standard practice for improving critical thinking.

We would like to consider one final point of interest. There is good reason to suppose that argument mapping will improve not just critical thinking but also society. First, the critical thinking skills that argument mapping seems to strengthen are associated with better decision-making, including socially-salient decision-making like getting a flu shot or drinking and driving (Butler, 2017). Second, argument mapping also helps students think more open-mindedly about controversial issues (Kaepfel, 2021).

Furthermore, there is reason to think that better critical thinking skills tend to make society more democratic (Aslan, 2018; Lantian et al., 2021; Glaeser et al., 2007). So, since argument mapping dramatically improves critical thinking, it's likely that widespread adoption of argument mapping would improve democracy. (We need more research to confirm and develop this hypothesis.) There are powerful reasons, then, for societies to invest in a large-scale shift to argument mapping, not just as a possible teaching method but as a democratic teaching method aimed at nurturing the democratic spirit and the critical engagement necessary to foster and complement its very possibility.

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The Impact of Frequent Interaction on Repeater Students

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Abstract: Data show that half of all students who have dropped/failed Survey of Calculus or Finite Mathematics at the University of Arkansas will drop/fail again. These students face a lack of motivation and a fair amount of anxiety toward mathematics. To make connections and create an environment in which they are comfortable discussing any issues with the professor, repeater students were asked to meet with the professor to complete a personalized academic improvement plan. This plan establishes the need for regular contact with the instructor and should increase the student's level of comfort with the instructor. Utilizing the "Academic Improvement Plan" serves as a catalyst for students to meet face to face with their professor and provides a roadmap for continuing that contact on a consistent and regular basis, regardless of the course. We believe that frequent and regular faculty/student interactions will result in increased academic success for this group of at-risk students while allowing these students to develop a deeper understanding of course materials, improve mathematical self-efficacy, and cultivate skills applicable to other courses/situations.

Keywords: *Mathematics*, Retention, Immediacy.

Citation: Hood, S. & Girshner, J., (2023). The Impact of Frequent Interaction on Repeater Students. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 318-322), Denver, CO, USA. ISTES Organization.

Introduction

Much research has been done regarding the relationship between instructors and students and the influence that this relationship has on student learning. While content knowledge and presentation are important to college teaching, the connection between students and the professor is equally important. In fact, in a 1997 study, researchers found that there were two main components of effective instruction: the instructional role and the personal role. The instructional role, of course, refers to the ability to clearly present content while the personal role is concerned with the interactions between professor and student (Abrami, d'Apollina, & Rosenfield, 1997). This is in line with the two-dimensional model of effective teaching as described by Lowman with the first dimension being "intellectual excitement" and the second being "interpersonal rapport" (Lowman, 1984). Establishing a positive relationship between instructors and students has been connected to an increase in class participation and enjoyment of course material by the students (Benson, Cohen, & Buskist, 2005). It has been

shown that perceived rapport between faculty and students has been a consistent predictor participation and learning (Frisby, 2010). It has also been indicated that value placed on personal faculty-student interactions by instructors is a more prevalent indicator of instructor accessibility than simply being present during regularly scheduled office hours (Wilson, Wood, & Gaff, 1974) . Based on our own review of the existing literature and finding strong results indicating that the faculty-student relationship is the most predictive of student retention and success, we decided to focus on a very specific, and at-risk, demographic of students in our courses.

At an SEC research institution with 30,000+ student enrollment, we teach two courses which have been considered “historically difficult”. From Fall 2016 through Spring 2018, our Finite Mathematics course had an average enrollment of 1148 students per semester and a DFW rate of 28%. Our Survey of Calculus course had an average enrollment of 478 students and a DFW rate of 31%. Among students who were enrolled in the same course for at least the second time, population average per semester of 132 and 73, these rates increased to 52% and 49% respectively. These repeating students, who were taking these courses for at least the second time, were much more likely to drop or fail the course again.

While we know that students can withdraw from classes for a variety of reasons, this population of students was easy to identify and target for outreach at the very beginning of each semester. We also noted that, based on our own personal experience, students who were failing seemed to be less likely to reach out with questions or to talk with us before making the decision to withdraw. Based on findings which indicate that student-faculty rapport formed early in the semester predicts academic success (Lammers 2017), we hypothesized that a focused and proactive attempt to establish positive relationships with these specific students early in the semester would be of great advantage to them and to us.

The Academic Improvement Plan

To make connections with these repeater students (students enrolled in a course for at least the second time), and to help create an environment in which they would be comfortable discussing any issues with us, this population of students were asked to meet with us to complete a personalized Academic Improvement Plan (AIP). This plan established the need for regular contact and was intended to increase the student’s level of comfort in reaching out for help or discussing any issues that may arise during the semester.

Over the course of three semesters (Fall 2018, Spring 2019, and Fall 2019), repeater students from 7 sections of MATH 2043 Survey of Calculus and 6 sections of MATH 2053 Finite Mathematics at the University of Arkansas were randomly selected to participate in this study. All selected sections of MATH 2043 were taught by the same instructor as were all sections of MATH 2053. In total, there were 101 repeater students with 50 in the AIP group and 51 in the control group.

Repeater students were identified during the second week of classes each semester. Students in the AIP group

were asked via email to meet with the instructor to discuss strategies for being successful in the course. To avoid any stigma associated with repeating a course, students were never called out or identified in class. Students who did not respond to the initial email were sent a second email the following week. Students who did not respond by the end of week 3 were sent an email every day until a meeting was scheduled.

In the initial meeting, students were asked to complete a customizable academic improvement plan. It was made clear to students that this participation was optional. However, in this initial meeting, no student declined to complete the plan.

The AIP itself consisted of two sections. In the first section, students were asked to give any possible reasons for poor academic performance in the course in the most recent previous attempt. A list of common responses was provided, but students could list, and discuss with us, any other contributing factors they thought were significant. This list could be edited as needed each semester to include common themes or to reflect the needs of different courses. Having students self-reflect and thoughtfully consider their past experience in the course gave us an individualized framework for more personalized discussion. These initial AIP discussions were always conducted as face-to-face conversations and, in general, made it much easier for us to establish plans of good practice for students and sometimes to help connect them with helpful campus resources they were often unaware of.

The second section of the AIP listed several strategies for improving academic performance. Here, again, these options could be edited based on the course and could be individualized for each individual student. Students were asked to choose three of the available options we offered and complete any blanks according to their schedule or needs. For example, a student could offer to spend a certain number of minutes each week working in our (free) tutoring lab or spend a certain number of minutes each day working on homework/coursework.

Some students indicated that they would meet with us at least once before each exam, while some felt it would be more advantageous to meet with us after each exam to review it. After the initial meeting, students were contacted by the instructor at least once each week to follow up on course performance. While it did seem that these students were more likely to attend office hours by choice and to talk with us before/after class meetings, no additional face-to-face meetings were required.

Results

At the end of three semesters of using this plan with a randomly selected group of repeater students, we saw a great improvement in the DFW rate among these students. For Finite Mathematics, the DFW rate for repeater students who completed the AIP was 27% versus 76% for those who did not complete the plan. For repeater students in Survey of Calculus, the AIP DFW rate was 13% versus 60% for the non-AIP group.

Finite	AIP treatment		Non-AIP control	
	Total	DFW	Total	DFW
Fall 2019				
n	8	1	11	11
%		13%		100%
Spring 2019				
n	9	3	18	10
%		33%		56%
Fall 2018				
n	9	3	7	5
%		33%		71%
Total				
n	26	7	36	27
%		27%		76%

Survey of Calculus	AIP treatment		Non-AIP control	
	Total	DFW	Total	DFW
Fall 2019				
n	7	2	7	5
%		29%		71%
Spring 2019				
n	11	1	0	n/a
%		9%		n/a
Fall 2018				
n	6	2	8	4
%		33%		50%
Total				
n	24	5	15	9
%		13%		60%

Discussion

Admittedly, many students did not follow through with the selections made on this section of the plan.

However, we believe that it was the personal contact initiated by the plan that made the difference and not the individual selections. Establishing a relationship with these students early in the semester, we feel, made us more approachable throughout the semester and increased their feelings of “connectedness”. This resulted in better-than-expected attendance, retention, and success rates for these students. A phrase we have heard many times before goes something like: “I don’t need to come to this class, I took it last semester, so I’ve heard all of this already”. While the fallacy of this is likely obvious to most faculty, we’ve found this to be a common belief within this population of repeater students. The AIP provides an early-in-the-semester opportunity to dissuade this reasoning.


Utilizing the AIP in our classes provided an individualized framework and served as a catalyst for students to meet with us to have a real conversation about their previous experiences in our courses. This initial conversation opened the door for students to continue that contact on a consistent and regular basis, regardless of the course. The results of these frequent and regular interactions resulted in significantly increased academic success for this group of at-risk students regardless of the individual strategies selected on the plan. Even though these students often did not completely follow through with “plan” as discussed in that initial meeting, we believe, and have results that strongly indicate, that establishing an early connection with these students made an impactful difference.

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The Sustainability in The New Scenarios of Transformation in The Rural Areas of Mexico

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Abstract: To address the challenges of sustainability in rural areas of Mexico, it must be considered that globalization opened the way to a new conception of rural development and consequently to a change of strategies aimed at achieving higher levels of productivity, often unrelated to social welfare. This widened poverty in the countryside and forced the displacement of millions of rural dwellers. Globalization was an imposition with consequences that exceeded the socioeconomic, cultural, and political capacities of the countryside. We must not lose sight of the close interrelationship of inequality and precariousness with environmental degradation caused by unsustainable development models such as globalization. This scenario leads to the search for solutions to ensure sustainability, so rural communities must design sustainable development strategies that prioritize their autonomy, self-sufficiency, productive diversification, and ecosystem management. Multifunctionality is a key tool for conservation and economic diversification, but it must be properly regulated to avoid restrictions on agricultural production and cultural values. Payment for environmental services is an option, but it must be accompanied by social development policies to ensure sustainable development in rural areas.

Keywords: Rural Economy, Globalization, Rural Migration, Rural Multifunctionality, Rural Areas.

Citation: Salas-Razo, G. (2023). The Sustainability in The New Scenarios of Transformation in The Rural Areas of Mexico. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 323-339), Denver, CO, USA. ISTES Organization.

Introduction

Sustainability is an increasingly important development approach, especially at a time when the world is facing a number of environmental, social, and economic challenges that require a sustainable solution. To speak of sustainability is to refer to the ability of the population to maintain itself over time without exhausting its resources, without damaging the environment, without affecting people's health, without disrupting their rights, and of course without compromising the economy.

In the new scenarios of transformation in rural Mexico, sustainability has become a priority, since technological, social, and economic changes have been creating an increasingly disruptive environment, which implies new

challenges to adapt to changes and remain sustainable; that is; our rural population must be able to change and evolve over time to meet their changing needs in the environment, ensuring the social welfare of the community.

The relevance of this approach to sustainability in rural areas of Mexico is greater if it is considered that precisely in them there is the most important supply of food to the population of the country, and is the source of natural resources that provides clean air that is breathed, of the water that is consumed, and the richness in biodiversity that characterizes the country; all this undoubtedly represents the essential resources for the welfare of society and for the development of the national economy.

However, despite the importance of rural areas in Mexico, today we see an uncertain scenario that manifests itself in marked social inequality, where the majority of its inhabitants live in conditions of poverty and lack access to basic services such as education, health, and drinking water; in addition to the lack of investment in infrastructure, the shortage of employment and low agricultural productivity aggravated by climate change that exacerbates droughts and increases water scarcity; added to this is the pollution of its rivers and lakes, and the forced displacement of the population due to violence, insecurity, lack of land and lack of economic opportunities.

Therefore, sustainability is an increasingly important approach as Mexico is facing environmental, social, and economic challenges that require sustainable solutions. This panorama leads to the search for solutions to ensure sustainability in rural areas of Mexico, where knowledge through education should be a key tool that promotes environmental awareness and development with a culture of respect.

For many years, governments and organizations have addressed the issue of education, and have carried out various initiatives to improve the educational level in rural areas in order to contribute to the economic and social development of the country. It has been argued that education as a knowledge base is a key element for economic and social development, as it provides the necessary tools to improve the quality of life, starting with a greater understanding of the environment, as well as the development of practical skills that allow the population of these areas to obtain well-paid jobs, which contributes to reducing poverty and improving living conditions.

Education should be one of the main factors for rural development in Mexico. This is a key tool for progress that provides people with the skills and knowledge necessary to improve their lives and that of their communities, and should be considered one of the main ways to improve the quality of life of people in rural areas; however, access to education in these areas has been one of the main shortcomings, as many communities lack adequate schools, making it difficult to access education appropriate to their community environment. This is due to the lack of financial resources, the lack of adequate infrastructure, and the lack of qualified teachers to train children and young people in an educational model according to their social and territorial context (productive vocation, endemic natural resources, culture, and tradition, among others). This means that many children and young people do not have the opportunity to receive an education appropriate to their sociocultural environment. In

addition, many rural schools lack the resources needed to provide quality education, making it difficult for students to prepare for a complex future.

It is therefore important for the Mexican government to invest in education in rural areas, to allocate financial resources to improve the infrastructure of its schools, to provide qualified teachers, and to improve the quality of education. This would help improve people's quality of life and contribute to rural development; including rural areas where there is a potential for development based on non-renewable natural resources such as mineral reservoirs, investment in educational programs could generate great economic potential through responsible and sustainable use in the extraction of these non-renewable natural resources; in addition to the economic benefit directly related to the exploitation of non-renewable natural resources that would promote greater political participation among the population. Education provides a greater level of understanding of the modern world in which they are immersed and would promote greater environmental awareness.

The new scenarios demand precise and effective solutions based on knowledge, so it is necessary to innovate in the transformation processes with policies and investments with a vision of development and social welfare in rural areas. A solution that reduces the gap of social inequality, creates new opportunities for economic development, generates a sense of attachment to the land, and adopts a culture of respect for nature.

Let's Talk About Sustainability

To speak of sustainability is to go back to the eighties of the last century when the term sustainable development was adopted, which integrates into an inseparable triad: social context, economic context, and environmental context (UNSDG, 2018). Since then, sustainability has referred to the ability of the population to maintain itself over time without depleting its resources, without damaging the environment, without affecting people's health, without disrupting their rights, and of course without compromising the economy.

Moving in time, in September 2015 the UN General Assembly adopted the 2030 Agenda for Sustainable Development, an action plan in favor of people, the planet, and prosperity, with the intention of strengthening universal peace and access to justice. It was designed to ensure that decision-makers, experts, governments, the private sector, civil society, and citizens, in general, did not lose sight of the close interrelationship between inequality, poverty and precariousness, and environmental degradation caused by unsustainable development models, such as the phenomenon of globalization (UNSDG, 2018).

Globalization has been a process of global economic, social, and cultural integration driven by international trade, foreign investment, migration, technology, culture, and politics. While globalization has brought many benefits, such as increased production, trade, and investment, as well as access to new technologies and markets, it has also generated a number of problems, such as inequality, poverty, and environmental degradation. These problems have highlighted the incompatibility of globalization with sustainable development.

Globalization has contributed to economic inequality by allowing various multinational companies to establish themselves in Mexico with low wages and in many cases with low or no taxes, which caused growing inequality. This has adversely affected sustainable development, as globalization has contributed to the deterioration of the environment, leading to the exploitation of natural resources at an unprecedented rate.

Therefore, globalization is an unavoidable topic in the analysis of the socioeconomic, political, and cultural transformations that have occurred during the last decades in Mexico; and this phenomenon has had a direct impact on traditional modes of production in rural areas and therefore in their marketing technology, evaluating, segmenting and diversifying markets and the local economy (Hernández, 2020).

Globalization has been an imposition with consequences that exceed the socioeconomic, cultural, and political capacities of Mexico, in this context the current rural development model must be redefined with the conscious acceptance of social, economic, and political actors, to go together with a model of sustainable development (Akizu and Rubio, 2005).

Globalization has led Mexico to high rates of rural migration, making the countryside multifunctional where women have had greater participation, but in an unequal scheme, making the current rural development model unsustainable.

That is why sustainability must be a priority for Mexico since it is the only way to guarantee the development of the nation in a politically, socially, and environmentally responsible context. The 2030 Agenda for Sustainable Development is a tool that will help us achieve a better quality of life for all, leaving no one behind. Globalization has brought many benefits, but it has also generated problems that must be addressed urgently. It is necessary to redefine the current rural development model to achieve sustainable development that allows Mexico to move towards a better future.

Method

Through documentary research, various investigations were identified that support the analysis of the sustainability in the new scenarios of transformation in the Mexican rural areas, starting from the origin of a currently unsustainable model and its economic, social, and environmental repercussions, to the analysis of a new scenario of transformation. The socioformative V was used as a method to identify the main problems of the planned context and to argue the axes of analysis and solution based on academic and scientific knowledge (González, 2018). The socioformative V focused on research allowed us to visualize the research problem with a focus on contribution to the analysis of the context. With it, a documentary record was elaborated that concentrated the information of indexed articles, academic books, and other documents that allowed to carry out the state of the art on sustainability in the new scenarios of transformation in the Mexican rural areas. The information was organized into categories according to the objective of the study and then explained in the

transformation scenarios. Subsequently, the findings of the research were analyzed from the following theme: globalization is a trigger for the problem in rural areas, sustainability in the current context of rural areas, and knowledge as a fundamental pillar to face the challenges of sustainability, measurement and its impact on rural areas, sustainability as a response to the challenges of migration in Mexico, and the multifunctionality and economy in rural areas. Finally, after the analysis and discussion of the topics investigated, conclusions were reached that describe the sustainability approach as the basis of the new transformation scenarios in rural areas that Mexico needs.

Results

In Mexico, the scarcity of employment and low performance in agriculture, worsened by climate change, forced displacement, lack of economic opportunities, insufficient access to basic services, and lack of investment in infrastructure highlight the need for a sustainability strategy to transform these rural landscapes.

The acuteness of poverty in rural areas of Mexico and the factors that correlate with it have their origin in the socioeconomic and cultural structures of the country and have been aggravated by the duality of realities that exist, such as the economic structure (modern sectors of high productivity generating great wealth next to precarious sectors of low productivity that do not generate sufficient income). To this can be added the return of the primary sector to the rural economy based on a policy of food sovereignty; indeed, without state investment and dependent on commodity business cycles, and with an inability to insert itself effectively into value chains (UNSDG, 2018; Hernandez, 2020). And what about deterritorialization, a direct consequence of globalization that brought with it the internationalization of markets and the development of a productivist agricultural model, where collective action strategies and relations between individuals depended less and less on the will of the social actors of the territory and more and more of the decisions taken outside the territory (Martínez, 2020).

Globalization is a Trigger for the Problem in Rural Areas

Globalization transformed local, regional, and national rural development into a gravitational model of financial, economic, environmental, political, social, and cultural processes of global scope, reshaping new challenges for rural areas. The multidimensional nature of this process and its global and local interdependence can be seen in the following dimensions: the technological dimension, shaped by the development of information technology, telecommunications, and new technologies for production, transport, control, and process management; the economic dimension, reflected in the existence of a transnational financial system, the internationalization and liberalization of markets, and the increase in productivity and business competitiveness; the cultural dimension, linked to the growing development of means of communication that allow the simultaneity of information; and the political/institutional and ideological dimension, based on the existence of a multipolarity within a space of hierarchies and domains, as well as through the construction of new institutions and forms of regulation of a global nature (García and Quintero, 2009; Hernández, 2020).

This is observed in unequal manifestations in rural areas with a tendency towards the commodification of practically all activities; reductionism that has not been possible to separate from food problems, unemployment, circles of poverty, climate change, waste of natural resources (including energy), the inability to manage solid waste, immigration problems, racial and gender discrimination, among others.

Globalization altered in a peculiar way the opportunities in rural territories and this brought with it restrictions for underdeveloped countries. These modifications varied depending on the geographical location of the territory, resources, availability, population behavior, economic structure, previous historical, cultural, and political differences; as well as their initial comparative advantages and ability to build new competitive advantages (García and Quintero, 2009; Hernández, 2020).

This territorial differentiation resulted in the disaggregation of society, making inequality and exclusion even more visible, which are clearly perceived by factors of gender, age, ethnic-cultural and racial, disability, social norms, migratory status, and geographical location within the same rural area (Akizu and Rubio, 2005; Rojas, 2009; UNSDG, 2018; Hernández, 2020). This is reflected in the precariousness of employment, the multiple occupations in work, the expulsion of small and medium producers, the continuous migrations, the growing reorientation of agricultural production towards export markets, and the articulation of agricultural producers to agro-industrial complexes in which the decisions of power centers predominate to large transnational companies (Tripín, 2005; Hernández, 2020); for this reason, citing the phenomenon of globalization is unavoidable in the analysis of the socioeconomic, political and cultural transformations that have occurred during the last decades in the rural sector.

In this context, in which the Mexican rural sector has been affected by globalization, a profound transformation has been brought about in the economic, social, and cultural structure of rural territories, generating increasing inequality among the inhabitants of these areas, who have been facing unemployment problems, poverty, climate change, migration, and marginalization, among others; for the fact that it is necessary for the Mexican State to take measures to guarantee the equitable development of rural areas, in order to improve the quality of life of its inhabitants and contribute to the sustainable development of the country.

Sustainability in the Context of Rural Areas of Mexico

In the new transformation scenarios, sustainability has become a priority as technological, social, and economic changes are creating an increasingly disruptive environment, which implies new challenges to adapt to changes and remain sustainable; I mean; the population must be able to evolve to meet its changing environmental needs without affecting social welfare.

From this perspective, development must consider as a starting point the set of resources that make up the heritage and the potentialities for sustainability in all the territorial units that possess the current Mexican rural

context (human, economic, cultural, and institutional).

Political and economic decisions taken from outside, aligned with the logic of external investment and in dissociation from the historical and social context of the territory, were decisive in the process of development of rural areas in Mexico; where deterritorialization represented the rupture between agriculture and territory, giving way to the decomposition of the peasant sector at the economic level, physical and socio-organizational.

That is why today that we talk about sustainability in the new scenarios of transformation in the Mexican rural area, the term territory must be retaken or reintroduced to rethink rural spaces as the spatial and economic dimensions in dynamic and constant interrelation with the cultural, social and organizational dimensions (Martínez, 2020).

In this sense, local actors (on their own initiative) must identify projects that allow them to be more competitive and at the same time, find solutions to the problems that afflict them; that is, sustain in their own territory the alternatives to promote development (García and Quintero, 2009).

This can be achieved by building new knowledge societies, with innovation and adoption of technological progress, with the renewal of traditional productive activities, with the use of endogenous and/or exogenous resources, and with a culture of cooperation. A development model based on the territory, open to the use of endogenous resources that facilitate the reactivation of productive dynamics, and the preservation of local traditions, considering the social and cultural context of the country (García and Quintero, 2009).

With this, rural studies and rural sociology can be redirected to the territory, visualized as a process of social production and a dynamic space of cooperation for the transformation of rural areas; an irreversible sustainable rural development, respectful of the environment, agreed by all the economic and social agents of the territory at the local level (Akizu and Rubio, 2005). This perspective of transformation in rural areas not only implies a change in the economic model, but the revaluation of the territory in the face of the destruction of ecosystems and the peasant economy (Babilonia, 2014); and, of course, to recognize the way in which social relations have been reconfigured, where discrimination divides the population between those who enjoy their rights and those who limit them, where dominant and subaltern sectors are distinguished, and where patriarchal values limit the autonomy and equality of women's rights (UNSDG, 2018).

Sustainability must be seen as a solution to the great challenges, among which the ravages of globalization stand out. It must be taken into consideration that the policies governed by economic theory and neoliberalism have promoted the creation of agricultural companies and the technification of the countryside, without taking into account sustainability in economic processes. This has prevented the incorporation of a vision of environmental economics that incorporates social capital, which could generate relationships of trust, reciprocity, solidarity, and cooperation. The lack of incorporation of social capital increases the complexity of the social and logical relations in which community production is immersed, which in turn reduces productivity and causes the

destruction of ecosystems (Rosas-Baños, 2013).

As already mentioned, globalization has been a historical process that modified rural activities affecting both men and women; however, the rapid increase in production for export created job opportunities mainly for women, since they showed greater availability to accept temporary jobs with lower pay and showed less interest in joining labor unions, unlike men. Women have also been shown to be more careful in their work, which is important when it comes to production for export markets that demand quality in agricultural products (Kay, 2009). In this context, women were integrated into the rural labor market and became a key element of the boom in agricultural exports, making them more visible in society.

Globalization offered an opportunity for collaboration in progress, capital spread much more easily than labor. This meant the diffusion of new technologies, especially those related to the electronic transfer of information, which made it possible to connect distant regions and countries in real-time and stimulate activities that required more qualified labor, which promoted the improvement of higher education and the reform of some social policies (Tapella, 2004; Guillermo de León, 2018).

Also, in this context of globalization, rural areas experienced significant changes, including the proliferation of non-agricultural activities in rural areas, relegating agriculture to a second or third place in the economy of peasant communities. This led to territories being multifunctional and inhabitants adopting multi-active economic strategies, i.e. the rural self-employed and/or employed worker carrying out activities in two or more different schemes of the Social Security System (Jamaica, 2022).

It is estimated that about half of jobs in non-traditional agricultural activities are held by women and that an even higher proportion of workspaces in agro-industrial processing plants are also occupied by women; although the few permanent jobs that tend to be better paid are occupied by men (Kay, 2009).

Discussion

To address the challenges of sustainability in rural areas of the country, it must be considered that globalization opened the way to a new conception of rural development in Mexico and consequently to new strategies to achieve higher levels of productivity and competitiveness, although often disconnected from social welfare, generating transformations in the organization of production, the financial and exchange market, the international division of labor and world trade framed in neoliberal policies (Akizu and Rubio, 2005; García and Quintero, 2009; Hernández, 2020); a scenario in which rural territories and their inhabitants could not escape from them.

That is why sustainability must be a priority for rural development in Mexico, since it is a tool that allows addressing the challenges of globalization, the pandemic, and poverty, through the implementation of strategies

that allow rural territories and their inhabitants to achieve greater social welfare.

Sustainability must be seen as a solution to the great challenges in the new scenarios of transformation in rural areas of Mexico. To this we must add that recently the pandemic caused by Covid-19, which has resulted in a considerable reduction in incomes in rural households and increases in food prices, reversing any progress that has been made in recent years with respect to poverty reduction, food insecurity and malnutrition in rural areas (ECLAC, 2021).

That is why sustainability must be a priority for rural development in Mexico, since only in this way can the quality of life of the inhabitants of rural areas be improved while promoting the use of natural resources in a responsible manner.

Knowledge is a Fundamental Pillar to Face the Challenges of Sustainability in Rural Areas of Mexico

The challenges of sustainability in rural areas must be addressed from different perspectives, including the study of economic, social, and political transformations with an approach that privileges the local relationship with productive activities and the effects of migrations; it represents a great challenge that must lead to the construction of knowledge societies, where scientific knowledge and peasant knowledge are combined to transform traditional production systems with innovations that promote the development of sustainable systems alternatives from the local territory. This requires a combination of local and scientific knowledge about the relationship between environmental or agroecosystem variables with territorial conditions, which requires innovation, adaptation, planning, and modeling (Gavito et al., 2017).

It is evident that knowledge and development require creative methods and innovative tools, which are not generated only from the perspective of academics and then transferred but are built through technological innovation aimed at sustainable agricultural production, with the exchange of knowledge and the active participation of local actors (including producers from the beginning and at all times). This is especially important in the current national context, where problems such as desertification, global warming, biodiversity loss, and other manifestations of global change are faced.

The interaction between scientific knowledge and local knowledge is essential to find alternatives to promote the culture of conservation of agroecosystems with complementary ecological functions. This includes the application of sustainable agricultural, livestock, and forestry management practices, the implementation of local energy and food self-sufficiency projects to guarantee the survival of the population during crisis situations, the configuration of marketing and distribution networks of goods and services, solidarity social organization, and the institutional and governance framework that promote and facilitate development (Gavito et al., 2017).

It is possible that these new challenges of sustainability in rural areas require a different and more local

economic perspective that recognizes that markets cannot assign value to natural resources and that peasant production systems must be more efficient and have a lower impact on the environment (Rosas-Baños, 2013); that is, to pose these new challenges with a transdisciplinary approach in the solution of social, environmental and economic conflicts that start from the application of ethical principles that guide decision-making and the construction of alternatives.

It is necessary to promote the progress of rural communities through the search for solutions to their social and environmental problems and must be accompanied by an exchange of knowledge between universities and research centers with a pluralistic approach that includes local actors and their knowledge (Rosas-Baños, 2013).

It is important not to forget that sustainability in rural areas is of great importance to supply food to the population throughout the country, provide natural resources such as clean air, drinking water, fertile land and generate sources of employment, in addition to contributing to great biodiversity and essential resources for the welfare of society and the development of the national economy. However, the global economic model has proven to be uneven and shows signs of exhaustion (Dolores and Crespo, 2019), which is manifested in greater social inequality and migration (Rojas, 2009; Rosendo et al., 2019).

That is why knowledge is a fundamental pillar to facing the challenges of sustainability in rural areas of Mexico. The development of a culture of conservation of agroecosystems, the application of sustainable practices of agricultural, livestock, and forestry management, the implementation of local projects of energy and food self-sufficiency, the configuration of marketing and distribution networks of goods and services, social solidarity organization, and the institutional and governance framework that promote and facilitate development, these are some of the actions that must be carried out to achieve sustainability in rural areas that allow the population to have food, clean air, drinking water, sources of employment and biodiversity. This requires a combination of local and scientific knowledge, as well as a transdisciplinary approach that starts from the application of ethical principles that guide decision-making and the construction of alternatives. Sustainability in rural areas is a task that must be approached from different perspectives, in order to ensure the well-being of society and the development of the national economy.

Migration and Its Impact on Rural Areas of Mexico

Social inequality has resulted in greater conditions of poverty, which forces us to change the perception of productivity and well-being in rural territories; therefore, we must rethink the rural context to transform it into a process of poverty of inclusive and sustainable growth, with the potential to reduce hunger and unemployment and adjust territorially to the rural environment without neglecting the environment (Jara et al., 2020).

The expansion of poverty in the countryside generated by globalization forced the displacement of millions of Mexicans, mainly to the United States of America (binational migration) in search of greater certainty, employment, and opportunities; although it also forced peasant migration to other states within the country

(internal rural-urban and rural-rural migration), an economic and social phenomenon definitely increased by inequalities and aggravated by natural disasters, violence and political instability, drug trafficking and extortion (Pérez, 2004; Rojas, 2009; Guillermo de León, 2018; Rosendo et al., 2019).

The importance of migration in the lives of rural populations is important since the way of life of rural communities is cemented. Rural migration involves the loss of labor to work in agriculture but represents a potential flow of capital from abroad that intensifies not only circulation but also goods, information, and technology. This has led to conditions of well-being for families in the place of origin since in some cases the capital resulting from migration has been invested in agriculture or has been used to pay off debts that in many cases cause greater migration, and have even been used as philanthropic remittances (Rojas, 2009; Garcia, 2016; Rosendo et al., 2019; Rodriguez et al., 2019).

The decision to migrate has become a subsistence strategy for rural families and involves the youngest, who send remittances to their relatives, although over the years these begin to space out (Kay, 2009).

Remittances have become an important source of income for many families, sometimes accounting for the bulk of their income. This has brought with it unwanted effects, as family members become dependent on them and do not feel the need to look for work. This makes sense considering that the oldest, the least educated, the least entrepreneurial, the disabled, and the very poor are those who stay in the rural community, contributing to increased inequalities and differentiation processes in communities (Kay, 2009; Rodriguez et al., 2019).

Unfortunately, in some cases, agricultural land is sold to finance migration, especially when there are profitability problems, which has made this phenomenon a part of culture in rural areas. This is because the incomes of its inhabitants, especially those of agricultural workers, are lower than those of other sectors, even in the same rural area (Rojas, 2009; Rosendo et al., 2019).

The negative effects of these factors have created a complex migration situation, making Mexico one of the main countries exporting workers to the United States of America; however, paradoxically, Mexico has become a place of welcome for workers from several Central American countries and also as a transit country for migrants heading to the United States of America, with unformalized Safe Third Country actions, which will be aggravated with the recent entry into force of Title 8 in the immigration laws of the United States of America; Mexico will face a greater migration crisis (Rojas, 2009).

It is important that the Mexican government takes measures to address the problem of migration and its impact on rural areas, as this can have a significant effect on reducing poverty and social inequality. This includes the implementation of policies that promote rural development, investment in infrastructure, improved education and health, as well as the creation of jobs and opportunities to foster the rooting of the population in their rural communities; measures that help improve the quality of life of people in the countryside, while contributing to the reduction of migration and the improvement of the security of migrants.

Sustainability as a Response to the Challenges of Migration

In Mexico, there is a great discussion about migration, where the federal government prides itself and boasts about the remittances sent by its migrants, while academics and businessmen see it as a sign of the lack of development policies and investment in rural areas that allow the population to take root in the countryside.

The lack of opportunities and investment in rural areas has been compensated by the remittances that migrants send to Mexico, which has contributed to poverty alleviation. This has allowed rural families to continue to subsist and local governments to take advantage of it as a form of development.

In some cases, remittances have generated new jobs (not related to agriculture); however, the degree of job insecurity and the migratory status of the rural community has not improved, making it difficult for the population that still lives in the countryside to remain in their territory (Rosendo et al., 2019).

This migration crisis and its consequences pose challenges that must be addressed from the perspective of sustainability, generating opportunities and transformative actions that prioritize the most urgent issues. This requires the search for resilience in agri-food systems, as well as a balance between the rural population and the environment, to correct the social, economic, and territorial inequalities existing in rural areas (ECLAC, 2021).

This transformation requires innovative actions in various fields, with new relationships, alliances, and collaborative work between public and private actors, civil society, the scientific and academic world, and international cooperation and financing agencies; in addition to investment and promotion of a comprehensive sustainable development program suitable for each rural area (a model of development from the local: from the bottom up). We must take advantage of the innumerable opportunities represented by rural areas, encouraging and promoting new socio-economic opportunities in rural territories, with precise and effective actions; with innovation in transformation processes and policies, and investment with a vision of development and social welfare in rural areas; actions like these can reduce the social inequality gap, create new opportunities for economic development, generate a sense of rootedness to the land and adopt a culture of respect for nature.

It is clear that the connection between migration and sustainable development is much more complex than a linear relationship, and cannot be explained with predefined patterns. These relationships have unique characteristics, depending on the context, the duality of references in the field of migrations and the approach chosen to evaluate the effects and results of the interaction in a local perspective. It is very difficult to reach a conclusion due to the diversity of perspectives and metrics, so it cannot be said that migration and development are always a combination that generates positive results.

However, it should be understood that the links between migration and sustainable development are largely more complicated than linear, and cannot be explained by predefined schemes or patterns of interpretation, since their relationships have unique characteristics, depending on the context, the duality of references in the field of

migration and, of course, the approach chosen to place the interaction of its effects and results in a local perspective; so it is extremely difficult to reach a conclusion, due to heterogeneity in approaches and measurements, so migration and development are not variables that always produce positive results when combined (Santos, 2009).

Despite the fact that the progress achieved so far (still very limited), the possibility of achieving such sustainable development remains open; if this aspiration is abandoned, the possibility of improving the situation in rural areas would also be abandoned.

Further research on the connection between migration and development is essential, including the analysis of development cooperation policies and the impact of remittances that migrants send to their families or keep in financial institutions with the intention of one day returning to their rural area of origin (Santos, 2009).

Multifunctionality and Economy in Rural Areas of Mexico

Multifunctionality and economics are two concepts that are closely related in rural areas. Multifunctionality refers to the capacity of a region to develop multiple economic, social, and environmental activities. This means that a rural region can develop agricultural, livestock, tourism, services, and energy production, among others. This allows the rural region to develop a diversified and sustainable economy.

Multifunctionality is an important tool for rural development. This is because it allows rural regions to develop a diversified economy, which makes them more resilient to changes in the market. This means that if a rural region depends on a single economic activity, such as agriculture, and this activity suffers a crisis, the rural region will be affected. However, if the rural region develops a diversified economy, it will be better prepared to withstand changes in the market. In addition, multifunctionality can also help improve the quality of life of rural dwellers. This is because diversifying the economy can generate more jobs, meaning more people will have access to a source of income and more resources to meet their basic needs.

The multifunctional approach offers the possibility of simultaneously considering the territory and the population that inhabits it as fundamental parts of the same strategic asset. This approach to the problems of rural areas from a broad perspective, covering the interactions between the countryside and the city, as well as the multiple options it offers in the agricultural and non-agricultural areas, offers numerous opportunities to contribute to rural development from the principles of the new multifunctional approach (Segrelles, 2007).

Multifunctionality can help improve the environment in the rural region. This is because the diversification of the economy can reduce the pressure on natural resources, such as water, land, and biodiversity; therefore, the rural region will have a healthier environment, which can help improve the quality of life of the inhabitants of the rural region.

It is important to note that multifunctionality is not limited to improving rural tourism, local crafts or the beauty of the region's landscapes, but also requires sufficient funds to: combat rural poverty; provide infrastructure, equipment, and public services in the countryside (especially educational); promoting rural employment; reduce the technological gap between large and small agricultural enterprises; avoid the loss of resources in rural areas; decontaminate water, land, and air; promoting organic farming; and reduce as far as possible excessive exports of raw materials and commodities that are based on the excessive exploitation of natural resources (Segrelles, 2007).

Multifunctionality in rural areas must be conceived in economic terms, but with an environmental approach, since it must attract public and private intervention to reduce the negative externalities of production systems through economic incentives such as the payment of environmental services (Rosas-Baños, 2013). When multifunctionality is adopted by the rural territory, it contrasts with the depopulation caused by neoliberal economic models that have hindered development.

However, rural multifunctionality can become a utopia if issues such as the concentration of land in a few hands, the marginalization of the small farmer, the almost absolute control of agribusiness, the occupation of land by non-food crops, the predominance of agro-export models, the lack of a common agricultural policy and the economic resources necessary for its regional integration are not addressed (Segrelles, 2007).

Despite attempts to improve conditions and quality of life in rural areas, neoliberal principles that maintain poverty, productive and social imbalance, and migration continue to predominate. That is why rural multifunctionality must be a priority for the development of rural areas in Mexico. This means that policies must be implemented that promote diversification of the economy, and access to land, employment, infrastructure, technology, and financial resources. This will enable rural regions to develop a diversified and sustainable economy, which will contribute to improving the quality of life of rural dwellers. In addition, this will also help to reduce the pressure on natural resources, which will contribute to improving the environment of the rural region. Therefore, it is necessary that measures be taken to promote multifunctionality in rural areas of Mexico to achieve sustainable and equitable development.

Conclusions

In the challenging socioeconomic context facing Mexico's rural areas, communities must design their own development strategies and adopt a sustainability and social reconciliation approach that prioritizes four fundamental principles: autonomy, self-sufficiency, productive diversification, and ecosystem management. As interest in sustainability increases, multifunctionality in rural areas becomes more important; however, these activities are often poorly or poorly regulated by the market, especially those that have a social or environmental impact.

It is necessary that the rural population, the government, and the business sector meet to discuss multifunctionality in the near future; this will allow economic diversification in rural areas, where their inhabitants can obtain additional income to combat poverty, as well as sustainable, multipurpose quality and environmentally friendly agricultural production.

Payment for environmental services should be explored as a conservation tool that drives an environmental economy; however, without a social development policy, this could erode culturally rooted conservation values, or limit development possibilities by restricting or forcing communities not to use their natural resources; these restrictions are the main reason why many rural communities are not interested in adopting any payment for environmental services program, in addition to the low remuneration that some government programs proposed so far. It is therefore important for rural regions to develop a multifunctional economy to ensure sustainable development.

Recommendations

It is important that the Public Universities of Mexico get involved in the challenges of rural development in the country, since they have the capacity to contribute with knowledge and social sensitivity to achieve sustainability in the new transformation scenarios. This implies that universities must work together with the government to promote sustainable development in rural areas, which are considered to be the motor areas of the country's development. This means that universities must assume a great responsibility to promote rural development, through research, education, training of human resources and technology transfer. In addition, universities should promote community participation in rural development, so that the inhabitants of rural areas can contribute their knowledge and experiences. This will allow rural communities to be an active part of rural development, which will contribute to the sustainability of these areas.

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The Challenges of Rural Development in Mexico

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Abstract: To overcome the structural problems that limit rural development in Mexico, it is necessary to analyze and rethink the strategies used so far. The new challenges of rural development must be faced with a territorial approach and integrating the various actors that make up the social, economic, and political structure of the countryside. Addressing these challenges requires a comprehensive approach that incorporates sustainability as the axis of development. With a long-term strategic vision, leadership, and political commitment, the multiple benefits that the rural sector needs can be achieved. This can be achieved by promoting development activities based on endogenous solutions, low-cost solutions with autonomy, and own resources. The way rural areas are viewed must be changed and recognized as an essential part of national economic and social cohesion. If Mexico transforms the vision of rural development and broadens it with a vision of social progress, the foundations will be established for equitable development in the countryside, with a focus on sustainability and ecofeminism. If there are no rural development strategies as a public policy objective, the country will continue to lag behind in rural areas.

Keywords: Rurality in Mexico, Socio-Territorial Development, Rural Migration, Ecofeminism, Rural Policies.

Citation: Salas-Razo, G. (2023). The Challenges of Rural Development in Mexico. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 340-361), Denver, CO, USA. ISTES Organization.

Introduction

When making an assessment of the current situation in the Mexican countryside, it can be seen that poverty is a major concern. This is due to low incomes, low productivity, and limited access to social protection. The numbers and proportions of poverty have remained largely the same over the past 20 years, with a worsening trend. According to CONEVAL (2020), 10.8 million people in Mexico live in conditions of extreme poverty, of which half are in rural areas.

In Mexico, rural development challenges must address three main areas: i) poverty and inequality, which are central problems in the Mexican countryside due to low wages, low productivity, and limited access to social protection; ii) migration, with migratory flows both within the country and to the United States of America that continue to increase in almost all regions of Mexico; iii) and rural governance, where rural reforms have led to the loss of state powers and attributions and the dissolution of peasant centrals that played the role of political and social intermediaries between the government and peasants (Gordillo, 2018).

To address these challenges, it is necessary for the Mexican government to develop public policies that promote rural development that allows peasants to improve their situation without having to move to cities and favor small farmers with equitable subsidies. This will require greater investment in infrastructure, education, health, and social services, as well as greater participation of civil society in decision-making. These public policies should be designed to address the challenges of poverty, inequality, migration, and rural governance, in order to improve the quality of life of rural Mexicans.

This situation challenges the beliefs of rural policies that assume a relationship between modernization and depeasantization, which means that public policies should promote the development of rural areas, instead of focusing on cities as centers of attraction for the rural population, which would allow the rural poor to have the opportunity to improve their situation without having to move to cities where they would become urban poor, and that should favor small farmers with equitable subsidies.

In order to achieve sustainable rural development, public policies need to focus on the multifunctionality of rural households, including agriculture, forestry, fishing, and other activities that contribute to monetary income and food security. This requires a reorientation of social protection policy and, productive development policy, as well as a multi-year budget for the implementation of rural financing mechanisms, reduction of social deprivation, and promotion of value chains. This would allow the rural poor the opportunity to improve their situation without having to move to the cities, where they would become urban poor, and that should favor small farmers with equitable subsidies

Recent changes in the Mexican countryside are reflected in the income structure of rural households, which shows the variety of activities carried out by rural inhabitants (multifunctionality). While agriculture, forestry, and fishing remain central to many households, they also contribute to monetary income and food security. This should be the basis for the promotion of rural policies that strengthen the domestic market, promote food production, the development of rural enterprises, the various mechanisms of rural banking and non-bank financing, the training of rural labor, and the reduction of social deprivation while boosting value chains in the most advanced agriculture. This would be achieved by breaking the institutional inertia, which reproduces the division of functions between social protection policy and, productive development policy, reoriented public spending in a strategy of territorial development to the different regions and making rural subsidies progressive; true articulation of productive and social policies that go beyond clientelist attention, as well as a multi-year budget (Gordillo, 2018).

An Overview of Rural Mexico Today

The spread of the Covid-19 pandemic had a disproportionate impact on the Mexican population, especially in the rural sector, where poverty is more common. This has caused a transformation in the way of life and survival of its inhabitants, and its effects will remain present for a long time, worsening the difficulties that already existed (Vilaboa-Arroniz, et al., 2021); and in socioeconomic, environmental, and productive terms, climate

change is also having a significant impact on rural areas of Mexico, causing crisis and disaster situations. This is reflected in the decline in agricultural production, which entails a risk to water and food supplies, as well as the loss of biodiversity (UNSDG, 2018).

Multifunctionality in the countryside has become a key strategy for rural development, as farmers have been allowed to diversify their activities to address this problem. In addition, multifunctionality contributes to the conservation of natural resources, the reduction of pollution, and the improvement of air and water quality. This helps maintain a healthy and sustainable environment, which is essential for rural development.

From this approach, due to its multifunctionality, the rural environment constitutes an important space for the development of Mexico, therefore, in the current scenario, the rural transcends beyond merely agricultural activities and expands the activities of other economic sectors, which involve the participation of actors with diverse functions and interests (Pérez, 2004; Noriero et al., 2008; García and Quintero, 2009; Babylon, 2014; Figueroa, 2021).

Over the past thirty years, deep crises and prolonged slowdowns have had a major impact on the rural economy, leading to a growing interest in the study of economic resilience. Empirical work on regional resilience has become more common in the context of developed economies, although so far very little attention has been paid to the behavior of rural economic resilience (Delgado-Bello et al., 2023). Therefore, it is of utmost importance to open new horizons of research on other economic forms that allow analyzing and understanding how people organize themselves to produce the material goods and services that make their lives possible in rural areas. The way rural areas are perceived must be changed, ceasing to think that it is a space immersed in epic resistances, in order to appreciate all its productive capacity (Jamaica, 2022).

It must be taken into consideration that rural areas of Mexico have been facing a crisis due to the phenomenon of migration, which leads to a reconsideration of development from a territorial perspective. The territorial rural development approach can contribute significantly to addressing the challenge of addressing the effects of migration on territories. Therefore, a reassessment of traditional rural development strategies is required to move towards a spatial approach that takes into account the relationship between the problems described and their agricultural-rural environment (Pérez, 2004; Rosendo et al., 2019).

In the pursuit of economic prosperity, disputes have been generated by encouraging productive projects that focus on the exploitation of natural resources for financial gain. This practice, although it can generate a quick profit, carries a number of risks for society and the environment. These risks include air, water, and soil pollution, destruction of biodiversity, loss of quality of life in local communities, increasing social inequality, and reduction of natural resources available for future generations (Azamar, 2019; Figueroa, 2021); therefore, it is necessary for governments and companies to take measures to minimize these risks and implement environmental and social standards, invest in clean technologies and promote sustainability. These measures will help ensure that productive projects are profitable in the long term, without compromising the health and

well-being of society and the environment.

All these circumstances mentioned (economic activity, migration and overexploitation of natural resources, and climate change) have contributed to the exacerbation of the problems of hunger, poverty, violence, and environmental destruction, which has led to questioning the idea of the rural, especially due to the decline of agriculture as an engine of development of rural spaces, as well as the disintegration of rural environments as a result of migration (Tripín, 2005; Noriero et al., 2008).

This is further aggravated by the presence of organized crime and corruption that have invaded rural areas, manifesting themselves in dispossession and violence, and provoking a social expression of discontent with the government. This crisis has eroded trust in the political class and the government, exposing the shortcomings of a poor development strategy and poor management of public administration (Pérez, 2016).

Despite the aforementioned facts, Mexico has a geographical location and characteristics that offer a great opportunity for development in rural areas. Therefore, it is necessary for society and government to work together to create a State agreement that addresses employment and wage issues (especially for the most vulnerable groups); maintain and expand strategic service offerings; promote investment projects for recovery (public, private, and mixed); stimulate the growth potential of the field; guarantee security and recover trust and social peace (Cordera and Provencio, 2020; Figueroa, 2021).

The truth is that, in the current context and political moment in Mexico, the polarization of society has generated greater inequality. Therefore, it is necessary that the government, workers, entrepreneurs, legislative and judicial powers, the States of the Republic, and the Municipalities reach an agreement to establish immediate measures to build a less vulnerable, better-prepared, safer, and more sustainable country (Cordera and Provencio, 2020). Addressing these major challenges will contribute to the well-being of the rural population, improve their quality of life and impact the country's development; it should not be forgotten that the rural sector is fundamental to the national economy and a key factor of social stability in Mexico.

The conditions the vulnerability of the population in rural areas have lacked the autonomy to demand, as part of their social rights, access to services, public works, and programs to combat poverty; rather it has become a humiliating plea as if it received a favor (Dzib, 2019). Rural areas require access to social services that contribute to the reduction of poverty, inequality, discrimination, and vulnerability, and reduce the distances between individuals, groups, and territories, strengthening true economic, social, and environmental sustainability (UNSDG, 2018).

Method

Through documentary research, various investigations were identified that support the analysis of the challenges

of rural development in Mexico, starting from an overview of rural Mexico today, to rural development policies with a comprehensive vision for overcoming current challenges. The socioformative V was used as a method to identify the main problems of the proposed context and to argue the axes of analysis and solution based on academic and scientific knowledge (González, 2018). The socioformative V focused on research allowed us to clearly visualize the research problem with a focus on contribution to the analysis of the context. With it, a documentary record was elaborated that concentrated the information of indexed articles, academic books, and other documents that allowed to carry out the state of the art on the challenges of rural development in Mexico. The information was organized into categories according to the objective of the study and later explained the great challenges that development in Mexico has from rural areas. Subsequently, the findings of the research were analyzed from the following theme: an overview of current rural Mexico; rurality, strategic restructuring of policies for sustainable local development; socio-territorial development, the contrast between rural localities and the response of public policies; sustainable rural development, an urgent need; challenges to equitable development in rural areas; integration of migrants into rural development; sustainability in rural development, a comprehensive approach to addressing environmental and social challenges; reinventing development, a state vision for inclusion, profitability, and sustainability; exploring the potential of technological innovation for sustainable rural development; and rural development policies with a comprehensive vision to overcome current challenges. Finally, after the analysis and discussion of the topics investigated, conclusions were reached that describe the challenges of rural development that Mexico must face.

Results

In the academic literature, the countryside is considered the driver of the creation of well-being for the inhabitants of rural territories; however, the concept of development varies according to the political context. The rural development approach presents different interpretations, such as integral development, which implies the participation of economic, social, and political actors and actions to improve the standard of living of the population; sustainable development, which refers to the use of natural resources to meet current needs without compromising their future availability; and sustainable development, which seeks to meet the socio-economic needs of the population on a sustained basis, without jeopardizing the future availability of resources. Therefore, rural development goes beyond the scope of field production as it is related to agroecological, sociocultural, economic, political, and historical factors, where the rural inhabitant is the main actor and beneficiary (Rosas-Baños, 2013; Vilaboa-Arroniz, et al., 2021).

Despite the advances, the Mexican countryside has undergone a lot of changes in recent years, both social and cultural, and economic, which has made the way in which the government has related to the field obsolete. This is reflected in the increase in the dynamics of land grabbing and neoextractivism, a practice that deeply characterizes the Mexican countryside (Noriero et al., 2008; Lopez, 2017).

Currently, in rural areas, there is a trend toward the reduction of agricultural areas and the decrease of

agricultural production, which has caused the expulsion of producers and the disinterest of young people to participate in these activities (Noriero et al., 2008). This situation is cause for concern since generational change is the best way to preserve the traditions, methods, and knowledge of the field, and for this to happen it is necessary that both the holders of knowledge and the young people who represent the generational change get involved. (Sandoval et al., 2022).

Agricultural activities in rural areas of Mexico are declining, being replaced by non-agricultural activities, which currently represent 55% of household income (Salgado-Nieto, 2019; Jamaica, 2022). This is accompanied by a situation of extreme poverty (17% of the population), smallholdings (with less than 5 hectares per producer), scarcity of natural resources (plant-soil-water) and little capacity to respond to natural disasters (droughts, hurricanes, floods). In addition, there are few opportunities for well-paid jobs (50% of the 4 million people working in the field are day laborers), low wages (150 to 200 pesos per day) and lack of social security (without access to benefits and medical services) (Vilaboa-Arroniz, et al., 2021).

This requires a reorientation of current public policies towards a new rural development policy appropriate to the new environments and focused on improving the well-being of the population (Herrera, 2013), which implies the creation of prosperous rurality that derives from a good relationship between society and the State, with regulatory mechanisms, with structural transformations, both economic and political, of each territory, and with dialogue and exchange of knowledge between science and local knowledge (Babilonia, 2014; Jara et al., 2020).

Rurality in Mexico, Strategic Restructuring of Policies for Sustainable Local Development

In the 1990s, the idea of new rurality in Latin America was presented, defined mainly by international development agencies and regional organizations specialized in rural development, such as the Food and Agriculture Organization of the United Nations (FAO), the Inter-American Institute for Cooperation on Agriculture (IICA) and the Inter-American Development Bank (IDB). This is based mainly on the appreciation of human and sustainable development, with the aim of increasing the well-being of people and, in general, helping solve the problems that affect rural communities; a proposal that arises from the top down (García and Quintero, 2009).

However, due to changes in rural areas, it is necessary to redefine rurality, therefore, the strategic restructuring of public and private policies in the context of sustainable local development.

Some international organizations, including IICA, emphasize some important reasons that justify the reconceptualization of rurality; such as the accentuation of imbalances in rural areas, the need to generate income and combat poverty, the recognition of the existing potential in rural areas for development, and the growing importance of development focused on territorial units (García and Quintero, 2009).

The truth is that over time Mexico's rural development policy has changed, at times it has been conciliatory and advocatory, while at others it has simply been absent from any discussion of rural welfare.

At present, rural development policy is fundamentally welfare and lacks a real general objective: the *development of the countryside*; therefore, a national strategy is required to mitigate or end the serious problem of marginalization in which a large part of rural communities live (Azamar, 2019; Figueroa, 2021).

The Government of Mexico, headed by President Andrés Manuel López Obrador, has implemented a series of social policies with the aim of achieving a more equitable distribution of resources among the most vulnerable and marginalized groups. However, these actions have turned out to be more clientelistic than a solution to the problem of poverty (Figueroa, 2021). The models based on these social compensation policies have contributed to worsening the situation of the countryside, since they do not produce the expected economic spillover effects, but rather deepen the differences between rich and poor in the country (Tripín, 2005). Unfortunately, public support aimed at improving the situation of rural communities has received little or no attention and investment, which limits its effectiveness; this is reflected in the way the public budget is exercised in Mexico.

Among the decisions taken by President López Obrador is to reform and renew the public and social life of the country through the so-called Fourth Transformation (4T). To this end, it made structural changes in the Secretariats of State, in this restructuring the Secretariat of Agriculture Livestock Rural Development, Fisheries, and Food (SAGARPA by its acronym in Spanish) became the Secretariat of Agriculture and Rural Development (SADER by its acronym in Spanish) in which new programs were incorporated for the benefit of small-scale producers with the argument of achieving food self-sufficiency and the rescue of the Mexican countryside; this as a corrective measure to the errors and inequities of the neoliberal model implemented in previous decades (Vilaboa-Arroniz et al., 2021). Among the populist assistance programs created are: production for welfare, support for coffee growers, sugarcane growers, fish farmers, and fishermen (USD 380 per year), guaranteed prices for crops of corn, beans, bread-making wheat, rice, and milk, livestock credit to the word, distribution of chemical and biological fertilizers, the Sowing Life program, and the creation of the Mexican Food Security Agency (SEGALMEX by its acronym in Spanish); by the way, the latter currently involved in a corruption scandal for millionaire diversions of resources.

In addition to this, for the second year of his Administration and prior to the pandemic caused by Covid-19, the López Obrador Government itself presented budget cuts in 20 of the 24 programs of the SADER, leaving them without axis or limiting several of their programs, since they did not there were and have been since that date financial resources for its implementation; only budget to maintain bureaucracy.

Similarly, the Special Concurrent Program for Sustainable Rural Development (PEC by its acronym in Spanish) had a budget reduction of 9%; a program aimed at defining policies contributing to the rescue of the agricultural, aquaculture, and fisheries sector; and aimed at achieving food self-sufficiency to ensure the right to nutritious, sufficient and quality food. This program should contribute to creating the conditions for comprehensive rural

development in rural areas of high and very high marginalization, guaranteeing the well-being and improvement of the quality of life of the population.

The same happened with the Seguro Popular program, which became the Health Institute for Welfare (INSABI by its acronym in Spanish) with insufficient budgets, a program of national importance aimed at providing services to the economically active population that is in informality, among which is the rural population (Vilaboa-Arroniz et al., 2021). In 2019, the government of Andrés Manuel López Obrador allocated a budget for Health for 2020 equivalent to 2.95% of GDP. However, in 2021, despite the thousands of Covid-19 cases, it decided to reduce spending to 2.66%; then in 2022 increase it slightly to 2.93%, and by 2023 maintain it at 2.80%. The worst thing is that recently in this 2023, the disappearance of INSABI was approved so that the Mexican Institute of Social Security for Welfare (IMSS-Bienestar by its acronym in Spanish) is the entity in charge of providing health services to people without social security in the country, this with the high risk of collapsing health services in Mexico and primarily in the most vulnerable sector, the rural.

Socio-Territorial Development, The Contrast Between Rural Localities and The Response of Public Policies in Mexico

In Mexico there is a great contrast between the situation of rural localities and the response of public policies; to understand it, one must make use of different visions of development: that of economic theory, that of rural analysis and that of the territorial approach; the first view of economic development refers to the productive vision, in which development is associated with increased production, industrialization and trade in goods; the second refers to a view that defines development as a process of expansion of human freedoms (capabilities); and the third view, taken from the properly rural analysis, it is the territorial approach to development that goes beyond (agricultural) production and the things that people can really do or be with the capacities they have, since it defines the rural territory as a space where converge in agricultural elements, but also social, economic, natural, cultural, historical, geographical, biological and ecological (Rosas-Baños, 2013; Gómez and Tacuba, 2017).

The representation of the territory as a common factor in development policies closely related to the State, establishes clear limits that can delimit the political-administrative scope of each region and establish the definition of territory as an area of government (Herrera Tapia et al., 2013, Vanoli and Cejas, 2022). This contrasts with the policies of economic development that have intensified the capitalist/extractive processes, making the territories spaces subscribed to by efficiency, promoting what can be called a social emptying of rurality.

In this context, it is possible to situate a process of socio-territorial development, which considers the territory not only a scenario in which social relations occur but also as a space of government and social struggle where different ideas and models converge around development, causing territorial impacts and creating forms of resistance and conflicts (Vanoli and Cejas, 2022).

In Mexico, the rural population is no longer limited to agricultural activities, but has diversified; however, this is not enough to meet their basic needs. When rural families cannot depend solely on agriculture and face serious subsistence problems, and when agricultural activity is no longer the most important source of income, they seek other forms of subsistence through their agrarian heritage, which contributes to their poverty situation (Rosendo et al., 2019).

Although employment in the countryside is not enough to support a family, it is still a real option for those who want to work in rural areas. This means that a major challenge is to get rid of the current idea about rural agriculture, demonstrating that this is a real, tangible and accessible work activity for all. This can be achieved through the promotion of agriculture as a main or complementary source of income for rural families, in addition to providing identity and a sense of belonging to those who exercise it. This can be achieved through investment in infrastructure, education and training for farmers, as well as the creation of support programs for farmers, such as subsidies, loans and other incentives. This will enable farmers to have a better quality of life, improve their incomes and contribute to the economic development of the region; in addition, it would help to improve the quality of agricultural products, which in turn will contribute to the region's food security. (Sandoval et al., 2022).

Therefore, if the diversification in the economic activities of the rural population in Mexico is not enough to meet their basic needs, it will be necessary to promote agriculture as the main source of income for rural families, this will require investment in infrastructure, education, and training, as well as the creation of support programs, such as grants, loans and other incentives.

Socio-territorial development in Mexico must consider the territory as a space of government and social struggle, where different ideas and models converge around development. This contrasts with the economic development policies that have intensified capitalist/extractive processes, making territories spaces subscribed to by efficiency, promoting what can be called a social emptying of rurality.

Socio-territorial development is a key tool to address the contrast between the situation of rural localities and the public policy response in Mexico. This requires an integral vision of development, which considers the territory as a space of government and social struggle, where different ideas and models converge around development, causing territorial impacts and creating forms of resistance and conflicts. Therefore, socio-territorial development is a key tool to address the contrast between the situation of rural localities and the public policy response in Mexico.

Sustainable Rural Development in Mexico is an Urgent Need

There are still those who argue that the model of rural development in Mexico is based on an open market economy with the purpose of improving human well-being that is established under the principle of damaging the environment (sustainable development), although in fact, it is only a purely instrumental change of values

(Akizu, 2005).

It was regrettable that the idea of sustainability had not been adequately exploited in Mexico's development models; this is likely due to the biased approaches that have been incorporated to pass off contemporary extractive capitalism as a productive model that can preserve the environment and achieve long-term social equity (Azamar, 2019). Therefore, it is necessary to implement a sustainable progress scheme that focuses on productive activity in rural areas, but at the same time environmental services must now be recognized as a tool to boost the economy of these areas (Pérez, 2004).

Managing and administering natural resources are part of the economic activities that must be carried out in rural areas. In addition, the use of the natural landscape as a place to enjoy free time and to achieve a better quality of life should be taken into account. These aspects have gained importance in relation to the concept of rural and sustainable development (Pérez, 2004).

Due to the sui generis combination of environmental, social, economic, cultural and political factors (Gavito et al., 2017) local rural development has been framed in a context composed of issues of the social order (participation, organization, and social capital, as well as the formation and/or adaptation of a network of socioeconomic actors), the economic-technological order (the aspects of the regional and global economy, the development of the business fabric, innovation, and technological progress, and the connection between urban and rural areas), and the political-administrative order (the role of the different government bodies in the development process, the choice of an agenda on local development and local planning); leaving environmental and cultural issues as a lower priority (García and Quintero, 2009; Herrera Tapia et al., 2013).

The implementation of a sustainable development model in Mexico should be a priority for the government, as it is a way to ensure the preservation of the environment and long-term social equity. This implies greater investment in rural areas, in order to improve infrastructure, education, and health, as well as job creation. In addition, the use of renewable energies, the conservation of natural resources, and the protection of biodiversity must be promoted. These measures would enable rural communities to improve their quality of life while achieving sustainable development. On the other hand, community participation in decision-making should be promoted, so that citizens feel part of the development process and are aware of the importance of sustainability. Finally, a regulatory framework must be established that guarantees compliance with sustainability objectives, as well as the responsibility of the actors involved.

Discussion

In Mexico, the countryside has been affected by a series of structural problems that have limited equitable development and rural transformation. This is due to a lack of investment in infrastructure, scarcity of financial resources, lack of access to technology, gender inequality, lack of education, and poverty. These constraints

have led to inequality among rural dwellers, which has contributed to marginalization in rural villages. It is, therefore, necessary to address the new challenges for equitable development in the countryside; reforms that should include the promotion of equality, the promotion of private investment and the creation of an adequate regulatory framework, and access to financial resources to improve their living conditions.

Challenges for Equitable Development in Rural Areas of Mexico

Due to the current circumstances in Mexico, it is necessary to adopt measures to change the development strategy, especially in rural areas, since the countryside is facing a post-pandemic situation that requires extraordinary policies to protect employment and income, maintain the productive plant, guarantee the continuity of strategic programs and services, encourage investment and support growth. To achieve this, the Mexican government must offer lines of credit and subsidies in territorial development programs, as well as consider the issuance of long-term Emergency Bonds. It is time for Development Banking and the Bank of Mexico to deploy their full potential and acquire a leading role (Cordera and Provencio, 2020).

Under the current circumstances, Mexico needs emerging programs for investment and financing of production, and not only support aimed at direct consumption for small producers or in situations of vulnerability; it is also necessary to invest in marketing schemes for agricultural products intended for domestic consumption, because despite that the consumption of food in the population is continuous, has and less demand for some products due to the low income of the working population.

Also, it must allocate funds to the development of infrastructure, financing productivity, expansion of the educational offer, and a large rural extension program for the accompaniment in planning and development from the particularity of each locality in such a diverse Mexican rural sector. A comprehensive financing strategy that promotes development and contributes to the fight for poverty eradication and the creation of opportunities for social inclusion, while encouraging scientific and technological development and innovation (UNSDG, 2018).

At the same time, the foundations must be laid for equitable development in the countryside (in the medium and long term) through a comprehensive development plan of institutional coordination (Vilaboa-Arroniz, et al., 2021). The main aspects of these actions would be, on the one hand, the replacement of the model of economic protectionism and State intervention in the economy, openness to the participation of national and international private initiatives, and on the other, administrative and fiscal decentralization between orders of government promoted by constitutional reforms and other instruments of public policy (Dzib, 2019).

Many aspects are required for rural transformation, including the diversification of rural activities and the importance of non-farm jobs and incomes in the livelihood strategies of peasants and agricultural workers. But this is not only limited to the economic sphere, although it is given priority but also encompasses changes in society, especially those related to the emergence of new actors and social movements, also including environmental sustainability, and the revaluation of the countryside (Kay, 2009).

Integration of Migrants in Rural Development in Mexico

One of the main challenges of rural development in Mexico is the phenomenon of migration, which has become increasingly complex. This is especially reflected in rural territories, where the inability to retain their population has led to a lack of local development. Therefore, a comprehensive development strategy with social and productive projects for the communities, municipalities, and regions of origin of migrants is required (Rosendo et al., 2019).

At present, in these places of origin, the rural population distribution is more inclined towards women on which the breadwinner of the family falls, and where regional social differences based on patriarchy prevent the correct distribution of goods and opportunities for them (Azamar, 2019).

That is why it is recommended to design strategies with the participation of the inhabitants of rural communities, especially to improve the quality of life of the community. Therefore, the inclusion of all people (including migrants) in their community development planning must be taken into account, to improve access to services, public infrastructure, and anti-poverty programs. This offers an opportunity for personal and family development, as well as being a social right (Figueroa, 2021).

International migration is a phenomenon that has affected Mexico for decades and has contributed to inequality between states and regions of the country, as well as poverty and lack of opportunities in rural areas. However, migration can also be a source of development for rural Mexico. Mexican migrants have contributed to the country's economy through remittances, investments, and knowledge transfers. These contributions have helped improve the quality of life of rural communities by providing them with resources for education, health, and infrastructure. In addition, Mexican migrants have also contributed to the integration of rural communities into national development.

The migration of Mexicans to the United States of America has been one of the main sources of income for the country, but it has also had a significant impact on rural development, as it has brought with it new ideas and technologies, which has allowed rural communities to improve their agricultural and livestock practices. This has contributed to higher productivity and a better quality of life for the inhabitants of these communities.

The integration of migrants back into rural areas has contributed to the cultural diversity of the country, bringing with it new traditions and customs, and transforming ways of life in the countryside.

It should not be forgotten that the potential and the most important wealth for development is constituted by its own people, including its migrants from their place of destination, for this from the bases of society and local communities settled in the various rural territories it is proposed to revalue the accumulated knowledge, betting on the creativity and innovative talent of their peoples and access to knowledge, this means establishing an inclusive system for processing social initiatives often financed by remittances (Jara et al., 2020).

Sustainability in Rural Development in Mexico: A Comprehensive Approach to Address Environmental and Social Challenges

Sustainability in Mexico's rural development is an issue of great importance to the country. Mexico's rural development has been affected by a number of environmental and social challenges, including poverty, soil degradation, scarcity of natural resources, lack of infrastructure and lack of access to basic services. These challenges have limited Mexico's rural development and affected the quality of life of its inhabitants.

To address these challenges, it is necessary to adopt a comprehensive approach that incorporates sustainability into Mexico's rural development, which means that rural development must be economically viable, socially just, and environmentally responsible. Achieving this requires a planned rural development approach that incorporates the principles of sustainability, such as conserving natural resources, reducing pollution, improving infrastructure, and promoting sustainable agriculture. In addition, rural development must be driven by the participation of the local community, which implies that rural inhabitants must have the opportunity to participate in decision-making on rural development so that they can contribute their knowledge and experiences. This also means that local governments must have the capacity to implement policies and programs that promote sustainable rural development. Solutions to rural development challenges should not only focus on cost-effectiveness, but should also address community weakening, political breakdowns, and above all, environmental degradation (Jara et al., 2020).

Achieving sustainability requires all of society to participate in the search for solutions. Therefore, new development models must be based on the sustainable use of ecosystems and their renewable resources. The scientific community can contribute to generating these models, but it cannot do it alone. A platform of academic and non-academic actors is needed to promote social awareness of environmental problems and generate a common interest to solve them (Gavito et al., 2017).

It is imperative that rural development plans observe this comprehensive approach, and urge that it gains strength, considering that rural areas have a high dependence on primary products and natural resources (UNSDG, 2018).

In this regard and under the social structure left by migration in rural areas, ecofeminism has been raised as a movement with an interest in ensuring the well-being of women, as well as its transformative role in the environmental issue. It is a transformative theoretical and political position focused on reversing the deterioration of the environment and that, in addition, fosters a struggle for the recognition of the rights of vulnerable population groups (Azamar, 2019). Ecofeminism assumes that women have a deeper and older relationship with nature, a bond that favors the development of a greater understanding of specific changes in their environment and a higher level of sensitivity about the way in which the indiscriminate use of natural goods is decided.

In the context of a multidimensional crisis saturated with uncertainties and great territorial imbalances, it is urgent to define shared strategies for sustainable development for agriculture and rural life; innovative, intersectoral strategies, inspired by new generation concepts, with new paradigms and ethical principles, capable of positively influencing international contexts, from the changing territorial dynamics (Jara et al., 2020).

Ecosystem services, biodiversity, and productive lands continue to degrade due to the predominance of an extractive model with insufficient socio-environmental considerations, together with the expansion of the agricultural frontier; phenomena that put the sustainability of development at risk (UNSDG, 2018).

It is necessary for the Mexican scientific community to be more involved in the production of knowledge that contributes to solving the serious environmental problems of rural areas and moving towards sustainability; a different perspective is required in research with innovative tools that are adapted to work in the rural community (Gavito et al., 2017). The more progress can be made in access to healthy food, education, health, social security, and decent work for rural society, the better conditions it will have to take care of the environment.

Reinventing Rural Development, A State Vision for Inclusion, Profitability, and Sustainability

It is necessary to return to the vision that: *Mexico's development is in its field*, and adopt a multidisciplinary approach that helps to better understand underdevelopment, only then can more appropriate development strategies be generated that consider the multiple and complex dimensions that have limited the development of the field.

We must stop seeing rural areas as the problem that limits development, and we must consider them as inescapable protagonists of economic and social cohesion in the countryside (Tripín, 2005). Rural development requires a new orientation, we must bet and reinvest in a new process of technological development and social innovation, we must adjust to the dynamics of the new era, to the new rhythms of the scientific and technological process, the contexts of openness and economic crisis, the new productive scenarios, the threats of climate change, the scarcity of natural resources and the fall in sectoral investments.

It is necessary to create ecosystems of interlearning, communicative exchange with society, greater organizational capacity, and active participation (Jara et al., 2020). But in order to build these ecosystems with integral solutions, social innovation and the prominence of peasant intelligence must be promoted as complementary elements of a vision of the State in harmony with the interests of the private sector.

It is necessary to sensitize the political class to expand the opportunities for access to knowledge and innovation in favor of the traditionally excluded rural population segments. Democracy and social movements can create the social conditions that guarantee the right to inclusive, cost-effective, and sustainable rural development (Jara et al., 2020).

It is not only about finding technical and economic solutions for less developed localities to achieve prosperity; but also involving all participants in development processes, among which are the State, universities, organizations, and private initiatives (Noriero et al., 2008).

Farmers' demands for innovation are complex and go beyond technological supply, including improvements in productivity, community reconstruction, support for cooperation between farmers, expansion and strengthening of the value chain, development of rural and agricultural development strategies democratically, and that everything is sustainable, competitive and inclusive (Jara et al., 2020).

The rural community requires new institutions that consider the gender perspective, the generation of employment, the redistribution of local wealth, the preservation of cultural identity and inclusion, since the institutions have been encapsulated in the old paradigms and what is needed is to know and understand how the territorial generation of innovations arises and multiplies and expose what are the obstacles that prevent the emergency of creative intelligence in the field (Jara et al., 2020).

Therefore, it is necessary for the State to promote a vision of rural development that contemplates inclusion, profitability, and sustainability, for this, it must have a multidisciplinary approach that considers the multiple and complex dimensions that have limited the development of the countryside. Mexico it must bet on a new process of technological development and social innovation, which allows us to take advantage of new productive scenarios, economic openness, the preservation of natural resources, and the inclusion of traditionally excluded rural population segments. Peasant intelligence must be a key element for the construction of ecosystems of inter-learning, communicative exchange, and greater organizational capacity. Democracy and social movements must be responsible for creating the social conditions that guarantee the right to inclusive, profitable, and sustainable rural development. The State must promote social innovation and the generation of employment, the redistribution of local wealth, and the preservation of cultural identity and inclusion, so that the rural community can count on new institutions that allow the emergence of creative intelligence in the countryside.

Exploring the Potential of Technological Innovation for Sustainable Rural Development in Mexico

Technological innovation should include the analysis of the processes of generation, adoption, implementation, monitoring, and evaluation of technologies. Generally, technological innovation reaches society through its commercialization by companies that develop patents to protect their intellectual property, a linear model strongly questioned since many are highly polluting, generate health risks, erode biological and cultural diversity, deplete natural resources, and consequently do not conserve resources, do not improve the quality of life, nor are they sustainable. Many of them are certainly accessible and are not adapted to the socio-environmental conditions of rural sectors, they focus on meeting a demand or a market and not social needs (Gavito et al., 2017).

The diverse and changing rural contexts in Mexico (its territorial and cultural configuration) say that there is no single model of innovation and technology transfer that has universal validity. Technological innovation for rural areas must be closely linked to the responsible use of natural resources and the generation of new green products, so it must be strengthened through the promotion of applied research (Pérez, 2004; UNSDG, 2018).

For example, the digitalization of agriculture can make a great contribution to the positive transformation of agri-food systems as it enables the generation and efficient processing of large volumes of data, enhancing learning, decision, and operation processes; or optimized precision irrigation that allows savings of up to 60% in water use (ECLAC, 2021).

Given these needs, different organizations have emerged that propose alternative models for the generation and application of technological innovations that promote a harmonious relationship with the environment and seek to provide tangible social and economic benefits in a specific socio-ecological context, a model of inclusive technological innovation (Gavito et al., 2017).

But technological innovation for the rural environment must not only be the product of applied, efficient, and profitable research but the product of social creativity and collective intelligence.

The institutional system of technological innovation and agricultural research in Mexico is far from functioning as a system composed of interrelated subsystems, institutional disarticulation, internal incoherence, and cognitive dissonance prevail, which translates into inefficiency and incongruity and tend to reproduce the same errors that have limited the development of the field (Jara et al., 2020).

Creativity is always alive in the social coexistence of rural areas, but there is still a negative perception of the creativity of the peasantry (of the human being), still inserted in rural life. Relying on the capabilities they have developed, across generations, to adjust to changes; technological innovation is part of social innovation (Jara et al., 2020).

Technological development policies should be designed to promote social innovation, which should be a combination of rural community creativity and technology. This will make it possible to use natural resources responsibly, improve the quality of life of the rural population and contribute to the sustainability of agri-food systems. Technological innovation must be a tool for rural development, allowing rural communities to take advantage of their resources and potential to improve their quality of life.

Rural Development Policies with A Comprehensive Vision to Overcome Current Challenges

Rural development policies are the set of actions aimed at improving the living and working conditions of the rural population, in particular small producers and workers, so rural development policies must take into account the existing heterogeneity in rural contexts, designing solutions to the measures to improve the living and

working conditions of the rural population, especially small producers and workers with little or no land; characteristics present in migratory territories (Rosendo et al., 2019).

This implies a comprehensive approach, which contemplates the participation of local agents and the adoption of innovative measures in the long term to achieve the sustainable development of rural territories, a development of a multidimensional, systematic, sustainable, and integrated nature with the active and concerted participation of the main local socioeconomic and political actors (García and Quintero, 2009; Kay, 2009).

To this end, the 2030 Agenda and the Sustainable Development Goals (SDGs) approved by the United Nations Member States can be resumed, which motivates countries to be better prepared to manage risks and, in this way, be able to make sustainable the advances in social welfare, a challenge shared by the Mexican countryside. This requires an articulation that must be concretized with public policies, from the inclusion of the SDGs in a desired vision of the future (through the design of institutional arrangements and their incorporation into planning instruments), to the realization of public and private financing, and the definition of a monitoring and evaluation plan (UNSDG, 2018).

This demands macroeconomic policies that promote decent job creation and support demand and investment in rural areas, along with fiscal, sectoral and infrastructure policies that increase productivity and foster entrepreneurship, creativity and innovation; without shirking Mexico's much-needed environmental policies.

The new challenges of rural development in Mexico must include environmental policies focused on reducing the ecological footprint; that is, that the actual use of resources (forestry, agriculture, soils for infrastructure, pastures, water, energy, fishery resources, emission of greenhouse gases) does not exceed the natural capacity of regeneration of these resources or absorption of carbon, in such a way that the future availability of the same is not compromised. One option for this is to generate circular economies, where waste from certain value chains is inputs for others. This will make it possible to decouple economic growth from environmental degradation, reduce the intensity of energy and material consumption, as well as the levels of pollution associated with all production and consumption functions within the regenerative capacity of natural ecosystems.

However, the institutional and political complexity of Mexico has been holding back development, and as an example of this, we can mention the initiative of the General Law of Circular Economy (GLCE), a legislative project that is pending discussion and approval by the Chamber of Deputies since November 2021, when the Senate of the Republic presented it. Although there have been spaces for a consultation to listen to experts and sectors interested in the subject in the Congress of the Union (Senate and the Chamber of Deputies) since April 2022, the Environment and Natural Resources and Sustainability and Climate Change Commissions of the Chamber of Deputies it is being held (pending ruling). This shows that social participation has not managed to be the transformed entity for the legitimization of public policies in Mexico, it is still rhetoric to say that the people rule as evidenced by the GLCE, frozen by struggles between political parties.

Political will is required to carry out institutional adaptation processes that allow the incorporation of mechanisms that suppose, in terms of management, an innovation in the design, implementation, and evaluation of public policies (Guardamagna and Reyes, 2019); when this does not happen, there is a danger of being trapped in a discourse as exemplified with the GLCE.

It is necessary to transform the perspective of rural development, not only as an area of production but also as an opportunity for social progress. This is the best way to address the rural environment, considering it in an integral way and starting with the size of poverty; the most important factor for public planning (Gómez & Tacuba, 2017).

If in Mexico there is no correspondence between formal institutions and actions in politics, there will be no impact on rural backwardness. Rural development as a public policy objective in Mexico lacks a strategy, the State has not been efficient in formulating, landing, and evaluating the instruments that best serve this objective.

Alternative policies must be thought of that include new objectives, new practices that regulate them, and new empathic rhetoric that depoliticizes rural development. If this were possible, the challenge would be to deal only with the allocation of resources, an aspect that would undoubtedly justify its financing with the demand of society (Tripín, 2005).

These alternative policies should be with a territorial approach, with development plans and programs for the rural sector; that is, differentiated policies that make visible inclusive social participation in development-promoting activities and in decision-making related to them (Farah and Pérez, 2003); alternative policies to correct market failures, especially for small and medium-sized producers, and not only to propose poverty alleviation projects that have ultimately only contributed to reproducing it (policies that promote intersectoral linkages for endogenous growth) (Pérez, 2004; Kay, 2009).

Mexico needs to institutionalize the way of creating policies with the participation and construction of rural development plans and projects that emerge from the bottom up (Pérez, 2004); it entails profound changes from the State, institutions, and society, and although this requires time and complex political decisions, the results can be seen and measured in the medium and long term.

The challenges of rural development in Mexico must be associated with local democratization processes to greatly value own resources, both human and natural resources. The challenges of rural development in Mexico also imply the search to overcome socio-political conflicts that hinder the advancement and general well-being of rural societies (Pérez, 2004).

A profound change in the formulation of public and governmental policies is possible, for this, there are two fundamental aspects to consider: the first is to achieve social welfare that transcends the modernization and infrastructure programs that now show signs of insufficiency, and the second consists of the challenge of

preserving the biocultural heritage (environment, culture, traditional medicine and agriculture) of indigenous peoples; that is, not to privilege the national economic interest over the social and ecological interest. Between both factors is the challenge of breaking with the clientelism that has generated a high dependence on a social policy of a welfare nature (Dolores, 2019; Maguiña et al., 2021).

It is essential to formulate a new legal and institutional system in which agreement will have to be sought with the participation of all sectors of national society involved in the development of infrastructure for production and trade. This should be through a consensus between sectors and as a concept of the orientation of expenditure and public action for the development of infrastructure for production and trade, the development of basic and applied technologies, education and training of the workforce, the implementation of new forms of organization of work and production in local and regional spaces, the diversification and linkage of markets, competitive financing schemes, the channeling of subsidies to finance the incremental costs of techno-productive changes, and a new social agreement that bases new operating rules (Pérez, 2016).

Conclusions

Achieving multiple benefits in the rural sector requires a strategic long-term vision, leadership, and political commitment for the integration of effective and inclusive policies, institutional and governance mechanisms, as well as responsive and adaptable tools to anticipate, assess and address national, cross-border, and long-term policy impacts. This can be achieved by promoting development activities based on endogenous solutions, low-cost or autonomous solutions, and own resources, as well as investments, access to basic infrastructure services, business modernization, value chains, market intelligence, and access to information, among others. This will make it possible to solve the problems of poverty and social exclusion, as long as there is solidarity among all the actors involved.

There is a need to change the way rural areas are viewed from being seen as a constraint to development and from recognizing them as an essential part of national economic and social cohesion. A new development process must be initiated to take advantage of the new scenarios.

In Mexico, a transformation of the vision of rural development is required, without neglecting production, but including social progress. The Mexican countryside has diversified, generating jobs and contributing to development.

It is necessary to lay the foundations for equitable development in the countryside through a comprehensive institutional coordination plan, which includes migrants in rural development planning. The new challenges of rural development cannot ignore the sustainability approach, where ecofeminism can contribute to development changes with greater social and environmental awareness.

Finally, if Mexico does not have rural development strategies as a public policy objective, it will be difficult to achieve an economically viable, socially just, and environmentally responsible countryside. Without adequate correspondence between institutions and political actions, the country will continue to lag behind in rural areas.

Recommendations

Government and civil society need to work together to address the challenges of rural development in Mexico. The government must provide a legal and political framework that allows the inhabitants of rural areas to have access to the necessary resources to improve their living conditions. In addition, the government must promote the participation of civil society in decision-making, in order to guarantee that the interests of the inhabitants of rural areas are respected and protected. On the other hand, civil society should work to promote awareness of the rights of the inhabitants of rural areas, as well as to promote community participation in decision-making. This includes the creation of support networks among rural communities. Finally, it is necessary for the government and rural society to work together to guarantee an equitable distribution of resources in order to improve their living conditions and guarantee sustainable rural development.

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A Study Case Regarding the Advanced Education for Optometrist Professionals in Romania

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Abstract: Optometry is becoming more and more interdisciplinary and gives new opportunities for collaborative research due to the accumulative complexity of knowledge and the rapid transformation of the technological capabilities in domains such as information technology, optics, applied engineering, health sciences, and entrepreneurship and management. Therefore, the paper presents a study case of a master organized at the University Politehnica of Bucharest related to the current challenges of optometrist education in Romania. The master program is carried out within the Faculty of Mechanical Engineering and Mechatronics of the University POLITEHNICA of Bucharest, being organized by the Department of Mechatronics and Precision Mechanics. and It falls within the Field of Mechanical Engineering specialization, according to Government decision no. 1609/30.09.2004, published in the Official Gazette of 18.10.2004. Conceived as a continuation of the bachelor's studies, the Advanced Optometry master program ensures the deepening in the field of the Optometry license program. It is an attractive option for the graduates of the Optometry program, accredited for the first time in 2007 and reaccredited in 2011. It ensures the development of scientific research capacities and is a mandatory preparatory basis for doctoral studies.

Keywords: Optometry, Occupation, Education.

Citation: Cristian-Gabriel, A., Dana, R., & Ciprian-Ion, R. (2023). A Study Case Regarding the Advanced Education for Optometrist Professionals in Romania. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 362-372), Denver, CO, USA. ISTES Organization.

Introduction

The Optometry Field

Nowadays, the optometry field becomes more and more interdisciplinary and gives new opportunities for

collaborative research due to the accumulative complexity of knowledge and the rapid transformation of the technological capabilities (Iskander, 2013) in the domains as information technology, optics, applied engineering, health sciences, and entrepreneurship and management.

The Optometry Occupation

In Romania exists the several occupations related to optometry (Ministry of Labor, 2022) optics. At the level of secondary studies exists a series of technicians with competencies related to lens and spectacles manufacturing as:

- centering and cutting optical parts
- degreaser, parts cleaner, and optical appliances
- optical apparatus fitter
- optical parts treatments specialist

Another occupation has specific competencies in the field of optometry:

- optical technician/optician with competence in optical instruments and devices assembling, repairing, design of the various parts of eyewear such as lenses, and frames. Also, the competencies include cutting, inspecting, mounting, grinding, coating, and polishing all optical parts and lenses using various machinery and hand tools and in the final, they can fit the lenses into eyeglass frames.
- Medical/dispensing opticians- have competencies in optical designing, fitting, and dispensing optical lenses based on a prescription from an ophthalmologist or optometrist for the correction of reduced visual acuity and can do the service for corrective eyeglasses, contact lenses, low-vision aids, and other optical devices.
- Optometrists- have competencies in eyes examination and testing to identify abnormalities, visual problems, or disease, and can prescribe and fit lenses such as spectacles and contacts and offer advice on visual problems.

At the level of higher education are two main occupations:

- optometrist (higher education)
- optical systems engineer/ optometric engineer
- Optomechanical engineer

Optometrists are other specialists in health and can examine and test eyes to identify abnormalities, visual problems, or diseases (Adams, 2007). According to the results, the optometrist can prescribe lenses (for spectacles and contacts lenses) and offer advice on visual problems and may refer patients to a medical practitioner. Optometrist interdisciplinary skills and competencies are accountability, advice on healthcare,

communication, education on the prevention of eye problems, use of e-health and mobile health technologies, use of optical devices, and selling lens or frames.

Optical systems engineers / optometric engineers are specialists who carry out research activities, recommend or develop engineering procedures and solutions regarding workplace safety, biomedical engineering, optics, materials, etc.

The optomechanical engineer can design and develop optical and optomechanical systems, devices, and components by combining optical engineering with mechanical engineering in the design of these systems and devices.

Regarding the level of the payment of an optometrist according with our surveys we can conclude that exist big differences between the employees in the regions of Romania. The average salary in Romania is 144163RON per year (29233Euro per year, taking into account the yearly exchange rate for 2022 of 4.9315lei for 1 Euro). In Bucharest, the capital of Romania, where is concentrated 10% of Romanian population the average salary is 162477 RON per year (32946Euro per year, taking into account the yearly exchange rate for 2022 of 4.9315lei for 1 Euro). In another big city, Brasov with a population of 1 % of Romanian population the average salary is 125390 RON per year (25426Euro per year, taking into account the yearly exchange rate for 2022 of 4.9315lei for 1 Euro). The minimum salary in Romania is 36996RON per year (7502Euro per year) so the optometry represents a good opportunity for the young professionals. The average salary in Romania will increase in 2028 up to 169080RON (34,285Euro per year, taking into account the yearly exchange rate of 4.9315lei for 1 Euro).

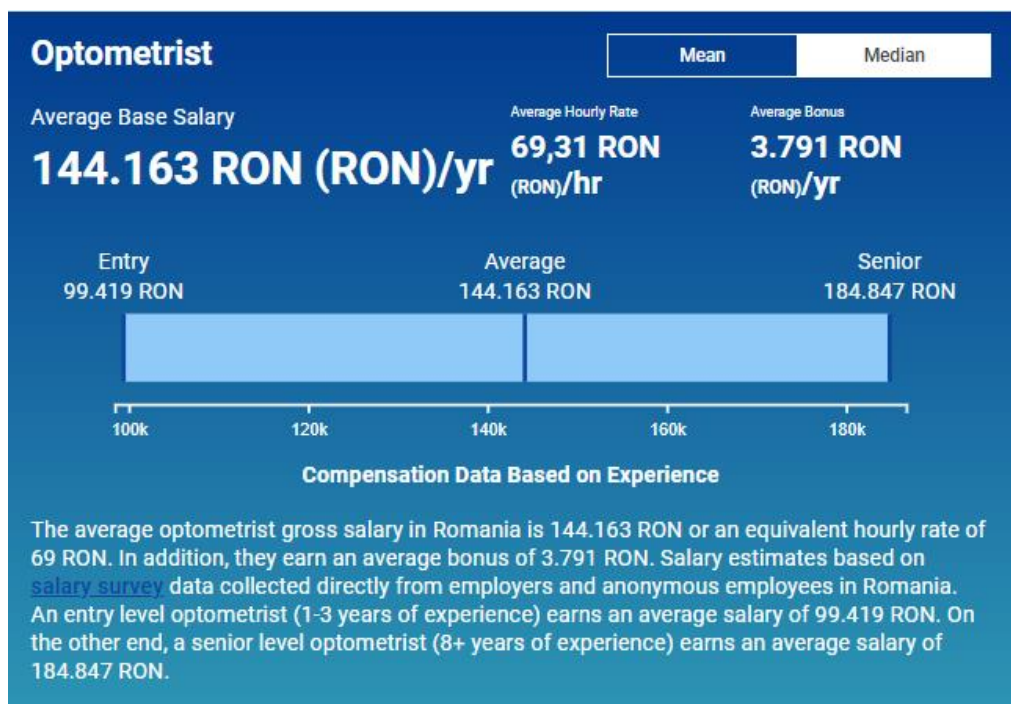


Figure 1. Average salary in Romania

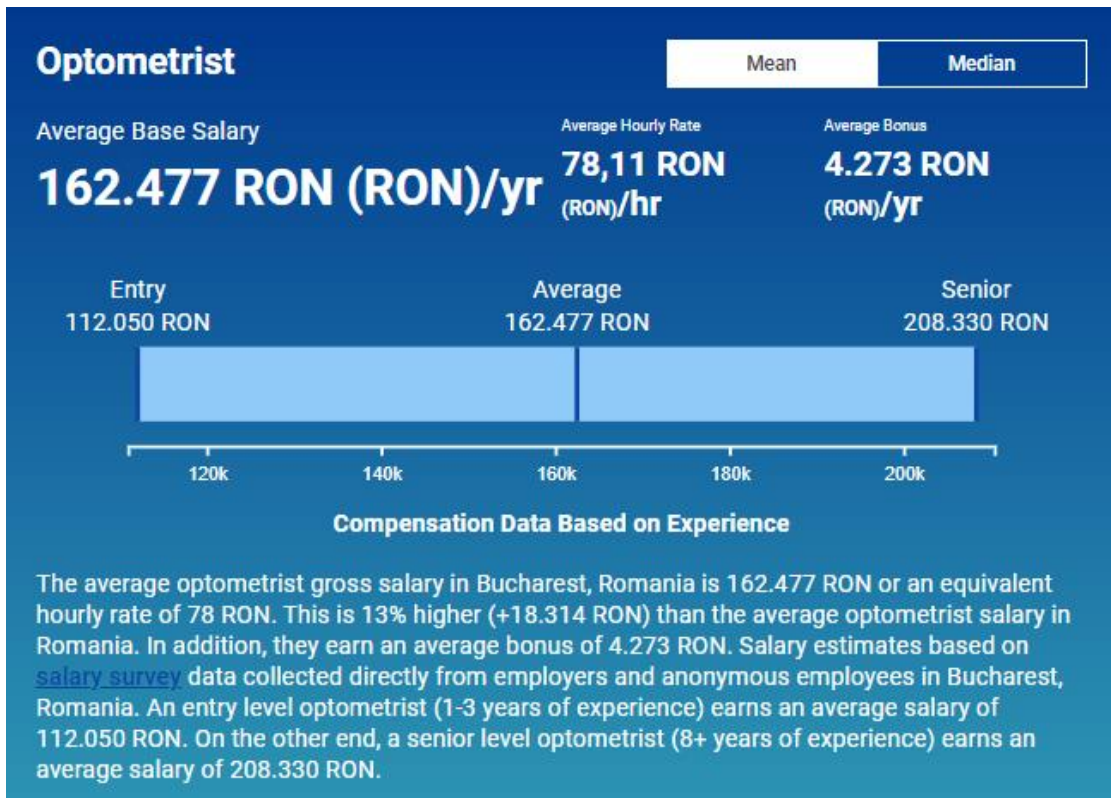


Figure 2. Average salary in Bucharest

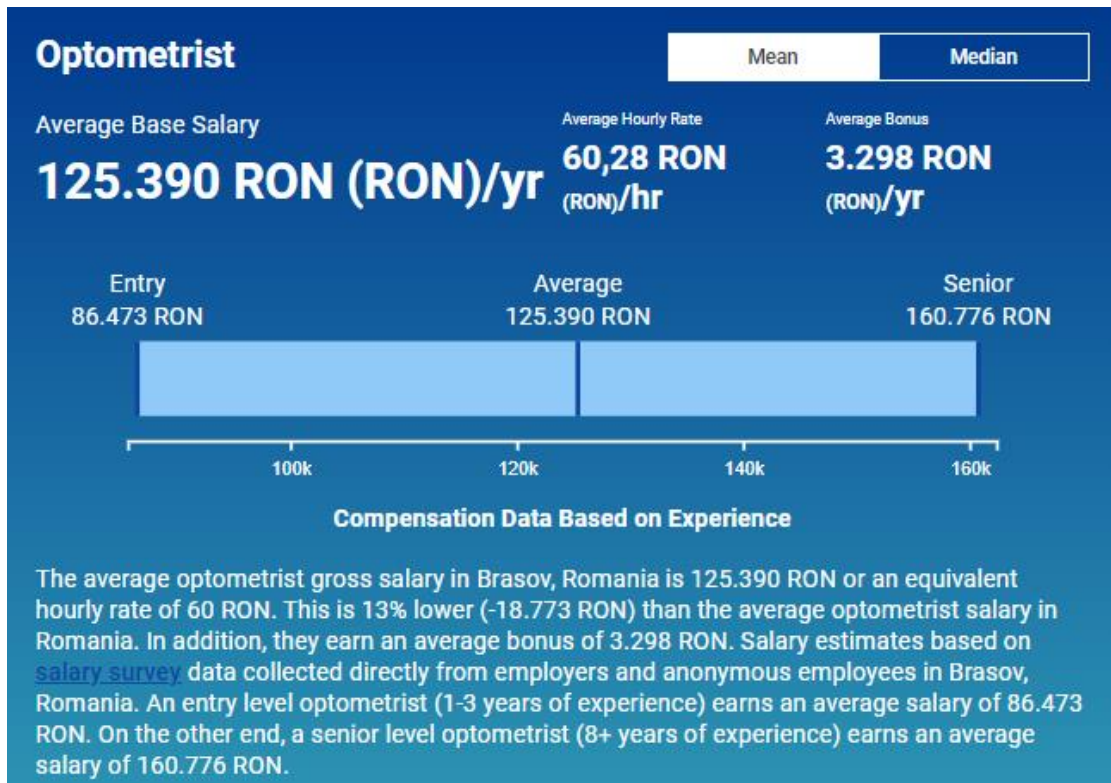


Figure 3. Average salary in Brasov

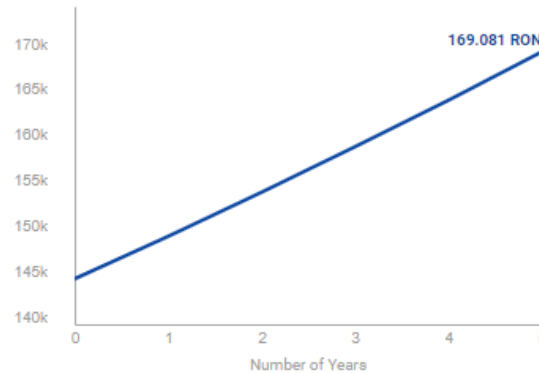
Salary Potential

Estimated Salary in 2028:

**169.080 RON
(RON)**

5 Year Change:

▲ 17 %



Based on our compensation data, the estimated salary potential for **Optometrist** will increase 17 % over 5 years.

Figure 4. Estimated salary in Romania for 2028

The Optometry Higher Education in Romania

In Romania, the higher programs related to optometry is organized four university centers:

- University Politehnica of Bucharest (Faculty of Mechanical Engineering and Mechatronics, 2022a; Faculty of Mechanical Engineering and Mechatronics, 2022b; Faculty of Mechanical Engineering and Mechatronics, 2022c; National Register of Qualifications in Higher Education, 2022) with Optometry - testing and prescription postgraduate continuous professional training – Optometrist (higher education), Optometry bachelor program for Optometric engineer qualification, and Advanced Optometry master program for Optomechanical engineering consultant qualification.
- University of Craiova (University of Craiova, 2022) with an Optical and Optometry master program for Medical Physics qualification.
- University Transilvania of Brasov (Transilvania University of Brasov, 2022) Optometry bachelor study program for glass and ceramics processing engineer.
- University "Alexandru Ioan Cuza" of Iași (Alexandru Ioan Cuza University Iasi, 2022) with an Optics and Optometry master program for Physician.
- Introduction

A Study Case. The Advanced Optometrist Education in University Politehnica of Bucharest

From the previous investigation can be seen that at University Politehnica of Bucharest it's the only place where a Master of Advanced Optometry is given a qualification related to optometry. Therefore, we will have the focus

on this educational program as a study case.

The master program is carried out within the Faculty of Mechanical Engineering and Mechatronics of the University POLITEHNICA of Bucharest, being the responsibility of the Department of Mechatronics and Precision Mechanics. It falls within the Field of Mechanical Engineering specialization, according to Government decision no. 1609/30.09.2004, published in the Official Gazette of 18.10.2004. Conceived as a continuation of the bachelor's studies, the Advanced Optometry master program ensures the deepening in the field of the Optometry license program and is an attractive option for the graduates of the Optometry program, accredited for the first time in 2007 and reaccredited in 2011. It ensures the development of scientific research capacities and is a mandatory preparatory basis for doctoral studies.

The program aims to develop knowledge in the field of optometry, in the direction of training for clinical activity, research and in the sense of opening to new fields, such as behavioral optometry. The field of optometry has experienced from 1994 until 2004 an evolution exclusively at the college level. Starting with 2004, the specialization Education Optometry for 4 years was created within UNIVERSITY POLITEHNICA OF BUCHAREST (such a specialization still exists only at the Transilvania University of Brasov, whose optometry education was created later and with the support of the one from the University Politehnica of Bucharest). At present, the training of optometrist engineers has been recognized including by the introduction by the Ministry of Labor in the new Classification of Occupations in Romania structure of the occupation "Optometrist higher education", included in the same group as the ophthalmologist. In fact, there is a good collaboration between the Optometry specialization from University Politehnica of Bucharest and the Faculty of Medicine, the ophthalmology specialization, including in didactic form (courses and laboratories of anatomy and ocular pathology, etc.).

Through this master, the necessary knowledge will be provided to the optometrists to work in ophthalmology clinics and hospitals for optometric testing problems (a concept already applied at the European level), to participate in the development of optometric equipment (as a partner of the optician engineer) and to support the development of new fields in the area of labor protection and efficiency. Thus, the development of ophthalmology and optometry will be supported at the clinical level or in the case of special categories of patients (elderly patients, patients in post-operative condition, etc.), conditions will be created for the relaunch of the production of ophthalmological equipment as well as for the introduction of modern methods of optimizing the working conditions in support of the specialized personnel. The training through the master's degree entitled Advanced Optometry from the Faculty of Mechanical Engineering and Mechatronics has as its main objective the assurance of theoretical and practical knowledge for the training of a specialist in optometry.

Regarding student admission Until the academic year 2013-2014, 25 places were allocated annually to the Advanced Optometry specialization. They were filled by admission/interview contest, according to the specific procedures of the university [<http://www.University Politehnica of Bucharest.ro/admitere-licenta.html>]. The situation of filling the seats in the last 5 years is presented in table 1.

Table 4. The statistics regarding the master program.

Admission year	Students	Year of graduation	Graduates	Employees in the field
2013	15	2015	12	12
2014	20	2016	13	13
2015	14	2017	13	13
2016	23	2018	23	23
2017	19	2019	19	19
2018	23	2020	23	23
2020	16	2022	-	-
2021	24	2023	-	-

The higher education institution organizes an admission contest (usually in July and September) based on an exam or aptitude tests, in specially organized sessions, according to the structure of the academic year approved by the University Senate.

University applies a transparent policy of student recruitment and admission, publicly announced at least 6 months before application. Admission is based solely on the academic skills of the candidate and does not apply any discriminatory criteria.

The students from the Advanced Optometry study program are involved in the student scientific research activity, actively participating in the communication sessions, organized annually within the University Politehnica of Bucharest, but also in other events. Starting with the academic year 2016-2017, during the session of student scientific communications was distinctly organized the Optometry session, being held 32 student scientific papers.

The professional competencies are divided into nine fields where six are professional and three are transversal:

C1 Computer-aided modeling of the visual system and simulation analysis of ocular behavior, including optical correction, in order to optimize optical compensation solutions.

C2 Conducting the testing of the optometric behavior, the approach of some specific global problems, on the process of vision in which the living conditions are taken into account.

C3 Knowledge of advanced design and analysis techniques of optometric equipment using the electronic computer and automatic calculation techniques.

C4 Applicative competencies regarding the perception of movement in differentiated environmental conditions

and the perception of space in mono- and binocular vision situations.

C4 Applicative competencies regarding the perception of movement in differentiated environmental conditions and the perception of space in mono- and binocular vision situations.



Figure 5. Testing of the optometric behavior



Figure 6. Analysis techniques of optometric equipment

C4 Applicative competencies regarding the perception of movement in differentiated environmental conditions and the perception of space in mono- and binocular vision situations.

C5 Competent for legislative aspects relating to the placing on the market of optical equipment for medical and optometric use as well as their implications in the verification of specific standards, including aspects of optical metrology.

C6 Competences regarding the ability to act independently and creatively in addressing and solving problems, competencies regarding the capacity of analysis and synthesis.

CT1 Fulfillment of professional tasks with an exact identification of the objectives to be achieved, of some potential risk factors, of the available resources, of the economic and financial aspects, of the conditions for their completion, of the working stages, of the working time, and of the related deadlines for achievement.

CT2 Responsible execution of multidisciplinary teamwork tasks, assuming roles on different hierarchical levels.

CT3 Identifying the need for in-service training and the efficient use of informational sources and resources for communication and assisted professional training (Internet portals, specialized software applications, databases, online courses, etc.) both in Romanian language and in an international language.

These competencies are split into knowledge and abilities. The pieces of knowledge are:

1. In-depth knowledge of an area of specialization and, within it, of the theoretical, methodological, and practical developments specific to the program; proper use of specific language in communication with different professional environments
2. Using specialized knowledge to explain and interpret new situations in wider contexts associated with the field

The abilities are:

1. Integrated use of the conceptual and methodological apparatus, under conditions of incomplete information, to solve new theoretical and practical problems
2. Nuanced and relevant use of evaluation criteria and methods to formulate value judgments and substantiate constructive decisions
3. Elaboration of professional and/or research projects, innovatively using a wide range of quantitative and qualitative methods

At the final exam the students have to fulfill the minimum performance standards for competence:

- Realization of applications using advanced knowledge for computer-aided modeling of the visual system and analysis by simulation of ocular behavior;
- Carrying out technical, execution, and maintenance projects for complex optomechanical systems through the correct use of the specific models of the field.
- Realization of applications regarding the design, execution, and maintenance of optical systems, used in optometry cabinets.
- Realization of applications regarding the design, execution, and maintenance of components, subsystems, and optomechanical systems.
- Realization of applications regarding the design, execution, and maintenance of optical subsystems. Legislative aspects relating to the placing on the market of optical equipment for medical and optometric use.
- Realization of technical, execution, and maintenance projects for complex optomechanical systems with the integration of component subsystems.

Conclusions

There are research plans at the level of the faculty of the programs in the field of optometry, which include research topics relevant to the field of master's degree studies and through the policy pursued at the level of the department director, dean, and rector, from the point of view of scientific research, the following can be stated:

1. The advanced optometry master study program operates within the Department of Mechatronics and Precision Mechanics, which includes the Research and Development Center for Mechatronics.
2. A medium and long-term strategy was designed with an application for projects financed by national and international funds, managing to access several projects.
3. Another concern is the performance of contracts with third parties.
4. The financing obtained through national and international programs allowed the development of their own research base by purchasing new equipment to complete the existing material base.
5. The team of the Department of Mechatronics and Precision Mechanics which organize the Advanced Optometry master program, consists of 3 professors, 4 associate professors, 9 lecturers, 4 Ph.D. students with frequency, possesses the necessary capacity to achieve the proposed research objectives;
6. The results of the research are materialized in participation in national and international conferences, symposiums, congresses, publication of monographs and books, etc.

The activities carried out within the master's degree programs contribute to the orientation towards the employment environment of the students and in the spirit of dissemination of the scientific results.

Based on the above, it can be stated that the scientific research activity knows an upward dynamic within the University Politehnica of Bucharest, the involvement of teachers and students included in master's study programs can be quantified, from the point of view of performance indicators as follows:

- At the level of the University Politehnica of Bucharest, the priority directions of scientific research have been defined, which also includes the master's degree program Advanced Optometry.
- The students of the master's degree programs are included in the research activities carried out in the projects carried out at the Department of Mechatronics and Precision Mechanics, through the Research and Development Center for Mechatronics.
- The research results are capitalized by publishing books, monographs, articles, etc.

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Addressing the Need for Smoking Cessation Policy Alternatives: Beyond Symbolic Interventions

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Abstract: Cooperative federal programs like Medicaid and Medicare plays an instrumental role in the prevention of health issues in the United States, particularly given their capacity to impact cancer rates by providing funding for smoking cessation initiatives. An evaluation of how Medicaid and Medicare promote or impedes smoking cessation enables stakeholders to engage health policy formation in a more active and efficient manner. Therefore, this quasi-experimental formative evaluation provides an empirical understanding of a single exploratory case study. The research explores what factors contribute to the promotion of, or barriers to, the effective implementation of the ACA-Mandated smoking cessation preventative health coverage in Louisiana. The study employs data for 5 years from 2017 to 2022 to answer the guiding questions of this applied empirical research.

Keywords: Public Policy, Public Health, Policy Formation, Policy Implementation, Formative Policy Evaluation, Social Impact Policy Evaluation, Smoking Cessation, Policy Advocacy, Louisiana.

Citation: Frazier, R. M. (2023). Addressing the Need for Smoking Cessation Policy Alternatives: Beyond Symbolic Interventions. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 373-388), Denver, CO, USA. ISTES Organization.

Introduction

In 1956, contemptable U.S. cancer rates led to Surgeon General Leroy E. Burney engaging a systematic study to determine the impact of smoking on health. Ultimately, in 1957, Dr. Burney issued a statement expressing, “the weight of the evidence is increasingly pointing in one direction: that excessive smoking is one of the causative factors in lung cancer” (Burney 1958, p.44). Hughes (2003) maintains that such punctuated events have led to increased government intervention through redistributive policies such as the Patient Protection and Affordable Care Act of 2010 (ACA). The ACA “required all new private health insurance plans to cover—with no cost-sharing—preventive services found to be effective by the United States Preventive Services Task Force” (USPSTF) (as cited by Kofman et al. 2012, p.4). The ACA defines cost-sharing as co-payments, co-insurance and deductibles. The USPSTF assigned a grade of “A” to smoking cessation programs which qualifies it for the aforesaid insurance benefits. The grade implies that there is a significant advantage in providing these types of programs to the public. Additionally, Kofman et al. (2012) expressed that in 2014 “preventive and wellness

services and chronic disease management” had to be “provided as an essential health benefit by all non-grandfathered plans in the individual and small group markets, including plans available inside and outside a Health Insurance Exchange” (p 4).

It is important to note that while the federal government regulates ACA implementation at the state level, the states are largely responsible for regulating insurance providers and may not always comply with the ACA mandates concerning coverage of smoking cessation preventative care. The rules associated with the execution of the ACA-Motivated preventative care plan is as follows (29 75 Fed. Reg. 41735 (July 19, 2010). 30):

“Section 2713 of the PHS Act, as added by the Affordable Care Act, and these interim final regulations require that a group health plan and a health insurance issuer offering group or individual health insurance coverage provide benefits for and prohibit the imposition of cost-sharing requirements with respect to: Evidence-based items or services that have in effect a rating of A or B in the current recommendations of the United States Preventive Services Task Force (Task Force) with respect to the individual involved....”

An obvious barrier that may prevent states from complying with the above mandate may simply be a lack of resources. For example, Medicaid enrollment has risen since the pandemic began in 2020 and federal funding has not been sufficiently increased to accommodate the influx of new enrollees. Thus, it is imperative for states to effectively appropriate the needed resources to meet constituent demand. Nevertheless, states are finding it difficult to expand and maintain the Medicaid program, as they have experienced budgetary shortfalls totaling \$555 billion through state fiscal 2022 (Aron-Dine, Hayes & Broaddus 2022).

Current Smoking Cessation Insurance Coverage in Louisiana

The level of insurance coverage in 2021 in the state of Louisiana for individuals 18 and up (adults) was classified into four primary categories: Medicaid (60.1%), Medicare (14.8%), Purchased (14.1%)/Employer (19.2%) and uninsured (12.0%) (Louisiana Health Insurance Survey, 2021). Table 1 depicts insurance coverage by health care option.

As illustrated above, residents of Louisiana subscribe to a myriad of entities to secure insurance coverage. Each insurer exercising the ability, within a seemingly flexible federal/state regulatory environment, to determine what particular coverage one receives for preventative care. But it is important to reiterate that the ACA is very clear on providing coverage for all aspects of smoking cessation preventative care with no cost-sharing. However, it is also imperative to restate that Medicaid falls under the banner of cooperative legislation which allows states to exercise a great deal of autonomy when regulating Medicaid and private insurance programs. This is evident in Louisiana’s ability to determine supplementary coverage on a case-by-case basis. Given the review of literature below, it is plausible to make a supposition that Louisiana is not providing a coverage environment the contributes to the decrease in smoking cessation rates. Thus, I engaged an exploratory study

intended to determine what type of policies or protocols are a cultural fit for the state, as policy makers must consider the culture of a community when developing effective policy initiatives.

Table 1. Smoking Cessation Insurance Coverage by Insurance Type in Louisiana.

Federal & Private Health Insurance Programs	FDA-Approved Medications	Individual Counseling	Group Counseling	Phone Counseling
Medicare	No coverage for OTC medications. Part D covers some prescription medications.	Up to 8 sessions/year.	Not covered.	Not covered.
Medicaid Fee For Service	All covered.	Covered <u>only</u> for pregnant women.	Not covered.	Up to 8 sessions/year.
Medicaid Managed Care Plans³	All covered.	Covered <u>only</u> for pregnant women.	Coverage varies by plan.	Up to 8 sessions/year.
Commercial Health insurance	Varies.	Varies.	Varies.	Varies.

Data was retrieved from the following organizations: Medicare Interactive (n.d.). Smoking cessation counseling. Retrieved from <https://www.medicareinteractive.org/get-answers/medicare-covered-services/preventive-services/smoking-cessation-counseling>. Centers for Disease Control and Prevention (2022). Table of Medicaid Coverage of Treatments: Counseling. Retrieved from <https://chronicdata.cdc.gov/Cessation-Coverage-/Table-of-Medicaid-Coverage-of-Treatments-Counselin/2nim-maxh/data>. 4. US Department of Health and Human Services. (2020). Smoking Cessation: A Report of the Surgeon General. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK555591/>.

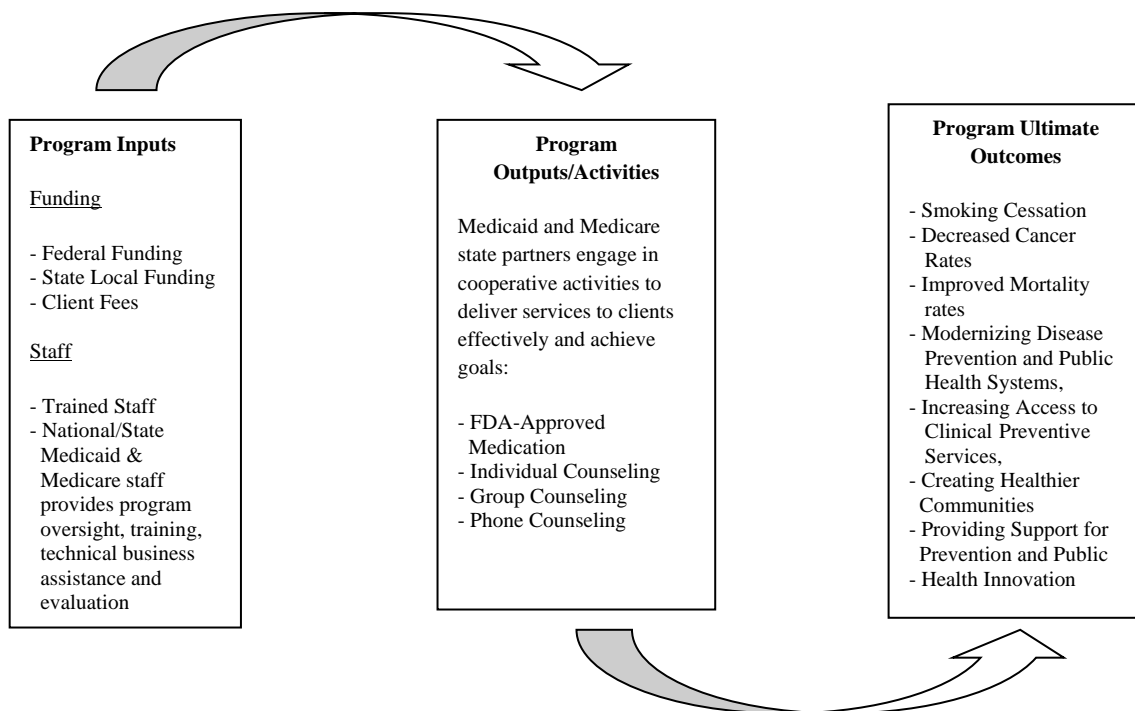
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An Illustration of the ACA-Motivated Preventative Smoking Cessation Initiative

To better understand how health providers are intimately involved in developing and implementing an ACA-Motivated policy initiative, a theory of action concerning cooperative practices with interagency partners are provided (see Figure 1). These formal public-private-alliances are essential to ensure that resources are maximized to execute the delivery of services in an effective and efficacious manner. Figure 1 illustrates that the provider contracts that Louisiana has established with third party entities are generally consistent with ACA legislative intent. Specifically, the ACA mandates the “prevention of chronic disease and improving public health” through a plethora of activities that include the following: Modernizing Disease Prevention and Public Health Systems, Increasing Access to Clinical Preventive Services, Creating Healthier Communities and providing Support for Prevention and Public Health Innovation (Patient Protection and Affordable Care Act 2010).

Louisiana Health Care Providers Smoking Cessation Coverage Theory of Action

A program’s theory of action depicts a program in a form that represents a plan for what the program is anticipated to do and how (Rossi et al., 2004). It also builds on needs assessment, thus linking the program design with the socio-economic conditions that the policy alternative is designed to address (Rossi et al., 2004). Therefore, it is germane to formative and impact evaluation, as process and impact research can be developed on the conceptual framework of a program’s theory of action. Figure 1 presents ACA-Motivated general theory of action relative to smoking cessation programing.



Note: The information is derived from the Patient Protection and Affordable Care Act of 2010

Figure 1: ACA-Motivated Smoking Cessation Program Theory of Action

Purpose of the Study

The purpose of this study is to determine what factors contribute to the promotion of, or barriers to, the effective implementation of the ACA-Mandated smoking cessation preventative health coverage in Louisiana. Content analysis of program manager interviews and federal, state and contracted state health insurance plans contributed to the findings of this study. The variables for this research were selected from the community-based participatory research and the smoking cessation literature.

The Minkler et al. (2008) Community-Based Participatory Research (CBPR) model serves as the analytical conceptual framework. Minkler et al. (2008) presents a CBPR model explaining subsequent stages that influence enhanced system & capacity changes and improved health in a given community. Given the consistency between the abovementioned program theory of action and the Minkler et al. (2008) CBPR model, there is reason to assume that Louisiana is achieving the ACA health care preventative goals and that theoretical assumptions apply to the context. But, given the many obstacles identified earlier, I hypothesize that cessation programs encounter many barriers that hinder their ability to meet ACA goals. Therefore, the study addressed the following questions:

Research Questions

- 1) What are the most significant factors that influence smoking cessation among Louisiana program participants?
- 2) To what extent are there impediments to or promotion of smoking cessation diffusion of service efforts through a community-based interagency approach?

Analytical Framework

The Minkler et al. (2008) Community-Based Participatory Research Model

Before expanding on Minkler and Wallerstein's (2008) framework, I present an illustration of the model in Figure 2 to demonstrate the model's mode of action. The illustration also demonstrates how each element interacts with the others to influence system & capacity changes and improved health.

The framework focuses on a tetrad of domains of CBPR and outlines the possible interagency alliances between each organization. Minkler et al. (2008) provides the following:

“Contextual factors” that shape the nature of the research and the partnership, and can determine whether and how a partnership is initiated. Next, group dynamics...interact with contextual factors to produce the intervention and its research design. Finally, intermediate system and capacity changes, and ultimately, health outcomes, result directly from the intervention research” (p. 380).

Conceptual frameworks that provide dynamic depictions of complex delivery structures are imperative to efforts to systematically measure or evaluate community-based interagency protocols and procedures and distribute effective and efficient methods.

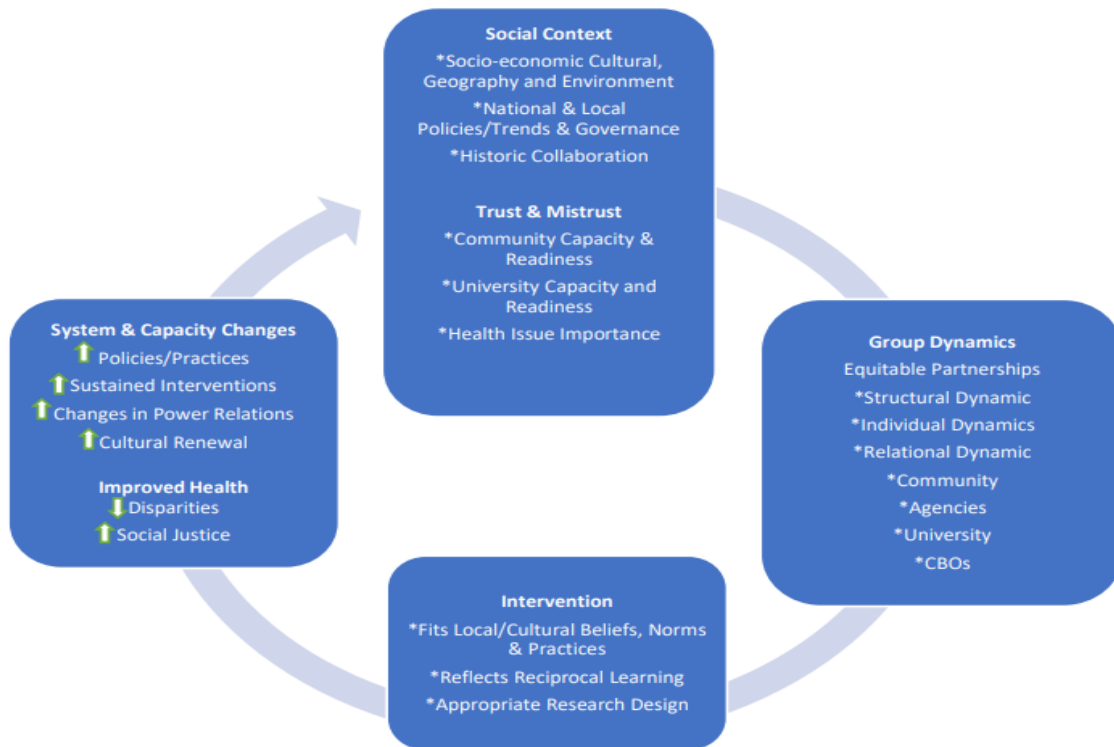


Figure 2: CBPR Conceptual Model. Minkler et al. (2008)

Review of Relevant Literature

Smoking is a significant cause of preventable death and disease worldwide. Smoking cessation is a critical component of global public health initiatives aimed at reducing the incidence of tobacco-related morbidity and mortality. Effective smoking cessation interventions require a comprehensive, individualized approach that addresses the specific needs and preferences of each patient. If the intervention is not approached in this manner, it is likely that patients will return to smoking. For example, a report published by the US Department of Health and Human Services (2020), expressed that 70% of Louisiana smokers attempted to quit smoking, but given the patchwork of interventions available, only 5% achieved their goal.

This thematic literature review examines current national and international best practices for achieving the goal of quitting smoking, synthesizing evidence from a range of studies and meta-analyses.

National and International Best Practices

One of the most consistent findings across studies is that a combination of pharmacotherapy and behavioral

therapy is more effective than either intervention alone. Fiore et al. (2008), recommends a combination of these approaches to increase the likelihood of successful smoking cessation, and a review by the US Preventive Services Task Force (Patnode et al., 2015) arrived at a similar conclusion. They definitively found that pharmacotherapy, such as nicotine replacement therapy (NRT), bupropion, and varenicline, can help reduce cravings and withdrawal symptoms, while behavioral therapy, such as cognitive-behavioral therapy (CBT), motivational interviewing, and group therapy, can help patients develop coping strategies and build self-efficacy (Patnode et al., 2015)

Several additional factors have been associated with successful smoking cessation. Kim et al. (2018) found that motivation to quit, self-efficacy, and social support were positively associated with successful smoking cessation in a study of Korean adults. These findings were consistent with a previous study showing that individuals who had higher levels of motivation and self-efficacy, as well as social support from family and friends, were more likely to quit smoking successfully (Park et al., 2015). Another systematic review and meta-analysis by Richter et al. (2016) identified cognitive-behavioral therapy and pharmacotherapy as effective interventions for smokers with current or past depression.

Smoking cessation is particularly important for patients with respiratory diseases, such as chronic obstructive pulmonary disease (COPD) and asthma. Tønnesen et al. (2013) emphasized that smoking cessation is a high-priority, integral component of therapy for patients with respiratory diseases, and recommended a combination of behavioral counseling and pharmacotherapy for effective smoking cessation interventions. Hospital-based smoking cessation interventions have also shown promise in increasing smoking cessation rates among hospitalized patients. Sheffer et al. (2015) highlighted the importance of hospital-based smoking cessation interventions, which can provide patients with support and resources during a particularly vulnerable time.

Demographic and smoking-related variables have also been associated with successful smoking cessation. Velicer et al. (2007) found that higher levels of education, being employed, and having higher self-efficacy were associated with successful smoking cessation. In addition, having more previous quit attempts and being more nicotine dependent were negatively associated with successful cessation. Thomas et al. (2013) also found that previous quit attempts and nicotine dependence were significantly associated with the experience of withdrawal symptoms, highlighting the importance of tailoring interventions to an individual's smoking history and preferences.

Smoking Cessation Interventions

Group behavior therapy programs have also been found to be effective for smoking cessation. Stead et al. (2013) conducted a Cochrane review of group behavior therapy programs and found that they were more effective than self-help materials for smoking cessation. Internet-based interventions for smoking cessation have also shown promise. Civljak et al. (2013) conducted a Cochrane review of internet-based interventions for smoking

cessation and found that they were effective in increasing smoking cessation rates. These interventions offer an accessible and convenient option for patients who may not have access to traditional face-to-face interventions.

Pharmacotherapy is also an effective smoking cessation intervention. Nicotine replacement therapy (NRT), such as gum or patches, has been shown to increase the likelihood of successful smoking cessation (Stead et al., 2016). Prescription medications, such as bupropion and varenicline, have also been found to be effective smoking cessation interventions (Cahill et al., 2014).

Electronic cigarettes (e-cigarettes) have been suggested as a potential tool for smoking cessation, but their effectiveness is a subject of ongoing debate. Kalkhoran and Glantz (2016) conducted a systematic review and meta-analysis of e-cigarettes for smoking cessation in real-world and clinical settings and found that e-cigarettes were associated with lower cessation rates than NRT. In addition, there are concerns about the potential risks associated with e-cigarettes, such as increased nicotine addiction and exposure to harmful chemicals.

In conclusion, effective smoking cessation interventions require a combination of pharmacotherapy and behavioral therapy, as well as follow-up support. Motivation to quit, self-efficacy, social support, and tailoring interventions to an individual's smoking history and preferences are all important factors for successful smoking cessation. Hospital-based and internet-based smoking cessation interventions have also shown promise in increasing smoking cessation rates.

Overall, it is important to ensure that the public have access to these services. If one cannot afford the required services, the ACA is clear on providing subsidies to economically disadvantaged persons who seek preventative health care. Specifically, the ACA dictates that if people require preventative services, it should be fully covered by all types of insurance. Brantley, E.J. et al., (2019) articulated it best in their research when they simply expressed that access to comprehensive insurance leads to the affordability of individualized comprehensive programs, thus contributing to enhance quit rates at the micro and macro level.

Research Design

The purpose of this quasi-experimental formative evaluation is to provide an empirical understanding of a single exploratory case study. Thus, the study is qualitative in nature. The research explores what factors contribute to the promotion of, or barriers to, the effective implementation of the ACA-Mandated smoking cessation preventative health coverage in Louisiana. Yin (1984) describes a quasi-experimental approach as an “empirical inquiry that investigates a contemporary phenomenon within its real-life context” (p. 23). The quasi-experimental approach also enables a researcher to generate clear objective data, find patterns, make predictions, test causal relationships, and make inferential assertions (Bhandari 2022; Burrell et al. 2017). However, this exploratory case study focuses on transferability rather than generalizability.

Through this approach, the study aims to apply the Minkler et al. (2008) model to federal, state and Louisiana state contracted insurers to measure the fulfillment of the ACA required program requirements as seen in Tables 2-6. As expanded upon above, Minkler et al. (2008) expresses that system & capacity changes and improved health is gained through a multi-stage process. Louisiana and its contracted partners are seemingly focused on community based preventative health care initiatives that are consistent with the Minkler et al. (2008) model and the ACA. Therefore, the Minkler et al. (2008) model is an appropriate model to gauge program formative success. Consequently, the following elements will be employed to assess the attainment of levels of system and capacity changes and improved health: Contextual factors, group dynamics, intervention, and lastly system and capacity changes and improved health.

Qualitative Data Sources and Empirical Analysis

Triangulation was utilized to collect data for this research. Triangulation is a methodology where data is collected utilizing multiple sources and methods to develop an intelligible understanding of phenomena (Patton, 2016; Merriam, 1998). Qualitative data for this evaluation were collected from two data sources: historical documents (ACA legislation, Louisiana Medicaid and Medicare legislation, Federal Employee Health Plans, Louisiana State Employee Health Care Plans, and Louisiana Managed Care Contracts with Aetna Better Health of Louisiana, AmeriHealth Caritas of Louisiana, Healthy Blue, Humana Healthy Horizons in Louisiana, Louisiana Healthcare Connections, Inc, and UnitedHealthcare of Louisiana, Inc.) and a purposive sample of smoking cessation program directors in Louisiana. The respondents provided rich data germane to the program through an interview process. Data was collected from historical documents to better understand legislative history, program protocol, and barriers to success and interviews were conducted to identify additional data to better understand frontline bureaucrat’s perceptions of the following: external and internal motivations influencing smoking cessation program participation, shared goals/cultural fit, adequate resources, and capacity to execute (see Appendix A). The frequency of concepts and words deriving from the ranking content coding analysis, as presented in Tables 2-6, were used to determine Louisiana’s capacity to deliver community-based participatory cessation services that are congruent with Legislative protocol mandates and intent.

Table 2. Data Sources and Collection

CBPR A Priori Codes	Data Sources	Essential Elements
Social Context : Trust & Mistrust	*Local, State, and Federal Policy *Interest Group Lobby Research/Policy Briefs *Community/Political Will & General Ability	*Socio-economic Cultural, Geography and Environment *National & Local Policies/Trends &

	<p>to launch (Interviews & Partner Resources)</p> <p>*Smoking Cessation Priority/ Budgetary Documents</p> <p>* Interviews</p>	<p>Governance</p> <p>*Historic Collaboration</p> <p>*Community Capacity & Readiness</p> <p>*University Capacity and Readiness</p> <p>*Health Issue Importance</p>
Group Dynamics	<p>*Controlling Mechanisms/Interagency Contracts</p>	<p>*Equitable Partnerships</p>
Intervention	<p>*ACA/Health Care Contractual fit with context</p> <p>*Focus Group Interviews</p> <p>* Program Evaluation Reflect Revised Policy or New Policy Alternatives</p> <p>* Appropriate Evaluations of State Smoking Cessation trends</p>	<p>*Fits Local/Cultural Beliefs, Norms & Practices</p> <p>*Reflects Reciprocal Learning</p> <p>*Appropriate Research Design</p>
<p>System & Capacity Changes</p> <p>Improved Health</p>	<p>* Recent Initiatives that Expand Network</p> <p>* Longevity of Program</p> <p>* Governance Shifts in Program Leadership</p> <p>* Shifts in Political and Social Culture (policy type and public support for policy type)</p> <p>*Adequacy of program coverage</p> <p>*Interviews</p>	<p>*Policies/Practices</p> <p>*Sustained Interventions</p> <p>*Changes in Power Relations</p> <p>*Cultural Renewal</p> <p>*Improved Health</p> <p>*Disparities</p> <p>*Social Justice</p>

Analysis and Findings

Data gathered from all sources were content coded using an interpretive analysis. While an interpretative analysis, in some cases, requires a researcher to first establish initial codes or categories based on theoretical perspectives, it allows the investigator flexibility to refine categories, add new categories, and establish subcategories based on an exploration of the data. The variables that Minkler et al. (2008) distinguishes as essential to system & capacity changes and improved health serve as a priori codes (*Analytical Tables below will be screen captured in a PDF, re-inserted into the Word Document, reduced and made to fit within the flow of relevant narrative/findings once data is retrieved and analyzed*).

Table 3. A Priori Code (Social Context/Trust & Mistrust)

Data Sources	CBPR Essential Elements	Louisiana Smoking Cessation Occurrences	Emergent Codes/Themes	Louisiana Smoking Cessation Occurrences
*Local, State, and Federal Policy *Interviews	*Socio-economic Cultural, Geography and Environment			
	*National & Local Policies/Trends & Governance			
	*Historic Collaboration			
* Interest Group Lobby Research/Policy Briefs *Community/Political Will	*Community Capacity & Readiness *University Capacity and Readiness			

& General Ability to launch (Interviews &Partner Resources) *Interviews				
*Focus Group Interviews *Smoking Cessation Priority/ Budgetary Documents	*Health Issue Importance			

Table 4. A Priori Code (Group Dynamics)

Data Sources	CBPR Essential Elements	Louisiana Smoking Cessation Occurrences	Emergent Codes/Themes	Louisiana Smoking Cessation Occurrences
*Controlling Mechanisms/Interagency Contracts	*Equitable Partnerships			

Table 5. A Priori Code (Intervention)

Data Sources	CBPR Essential Elements	Louisiana Smoking Cessation Occurrences	Emergent Codes/Themes	Louisiana Smoking Cessation Occurrences
*ACA/Health Care Contractual fit with context/Louisiana	*Fits Local/Cultural Beliefs, Norms & Practices			

Smoking Cessation Time				
Series Trends				
*Interviews				
* Program Evaluation	*Reflects Reciprocal			
Reflect Revised	Learning			
Policy or New				
Policy				
Alternatives				
* Appropriate	*Appropriate			
Evaluation of	Research			
State Smoking	Design			
Cessation Programs				

Table 6. A Priori Code (System & Capacity Changes and Improved Health)

Data Sources	CBPR Essential Elements	Louisiana Smoking Cessation Occurrences	Emergent Codes/Themes	Louisiana Smoking Cessation Occurrences
* Recent Initiatives that Expand Network	*Policies/Practices			
* Longevity of Program	*Sustained Interventions			
* Governance Shifts in Program Leadership	* Changes in Power Relations			

* Shifts in Political and Social Culture (policy type and public support for policy type) * Interviews	*Cultural Renewal			
* Longitudinal Louisiana descriptive statistics via CDC and American Lung Association * Interviews	*Improved Health *Disparities *Social Justice			

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Exploring Differences in Academic Priorities: A Comparison of Turkish and Singaporean Mathematics Teachers' Responses to TIMSS 2019

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Abstract: This research aims to compare the responses of Turkish and Singaporean mathematics teachers to school emphasis on academic success questions. The research was conducted following the causal-comparative design. The research study group consists of Turkish and Singaporean eighth-grade mathematics teachers who participated in the 2019 TIMSS. The data collection tool used in this study consisted of survey items directed to teachers under the "School Emphasis on Academic Success" category in the 2019 TIMSS. The Cronbach's alpha coefficient was calculated as 0.89 for the Singaporean sample and 0.90 for the Turkish sample. Independent samples t-test was used to compare the averages of the scores obtained from the survey items of Turkish and Singaporean teachers. According to the results obtained, Singaporean teachers expressed more positive views about their schools regarding teachers' expectations for student achievement, parental involvement in school activities, parental support for the instructional process, students' desire for success, and students' ability to reach academic goals compared to Turkish teachers. On the other hand, Turkish teachers expressed more positive views about their schools regarding the ability of teachers to inspire students and the collaboration among teachers for planning instruction compared to Singaporean teachers. The results showed that Turkish and Singaporean education systems have different priorities and emphases.

Keywords: TIMSS 2019, School Emphasis on Academic Success, Singaporean and Turkish Mathematics Teachers.

Citation: Yurt, E., (2023). Exploring Differences in Academic Priorities: A Comparison of Turkish and Singaporean Mathematics Teachers' Responses to TIMSS 2019. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 389-401), Denver, CO, USA. ISTES Organization.

Introduction

Teachers have an essential role in education systems. The education system is a system that shapes students' lives and has a significant influence on their future success. Therefore, it is inevitable for teachers to play an essential role in the education system especially by providing student-centered activities such as peer learning learning to foster students' competences e.g. critical thinking, reasoning and argumentation (see Acikgoz & Akman, 2023; Demirbilek, 2022; Eski & Akman, 2023; Latifi et al., 2021, 2023; Noroozi et al., 2012, 2018, 2020; Ozturk, 2023; Ozturk & Susuz, 2023; Valero-Haro et al., 2019, 2022). The importance of teachers for the

education system stems from the fact that they are one of the most critical factors in students' learning process. Studies show that teachers significantly impact students' academic success, attitudes, and behaviors (Hattie, 2003; Darling-Hammond, 2006). However, teachers have an important role in the education system because not only the students' academic success. Teachers are also responsible for responding to students' social, emotional, and psychological needs. Teachers' guidance and support can significantly affect students' self-confidence, self-esteem, and emotional well-being (Sklad et al., 2012).

As a result, teachers are of great importance to the education system. They are crucial in many factors that affect students' lives and determine their future success. Teachers' influence on students' academic achievement, attitudes, and behavior is only one aspect. They are also responsible for responding to students' social, emotional and psychological needs. This research aims to compare the answers given by Turkish and Singaporean mathematics teachers to questions about school success. This comparison can help better understand the differences and similarities between the Turkish and Singaporean education systems.

Trends in International Mathematics and Science Study (TIMSS)

Trends in International Mathematics and Science Study (TIMSS) is an exam organized by the International Association for Educational Evaluation (IEA) measuring students' mathematics and science success. TIMSS contributes to the evaluation of education policies and practices by measuring the achievement levels of students in mathematics and science subjects based on essential knowledge and skills (IEA, 2021). TIMSS is implemented in many countries around the world.

TIMSS, organized for the first time in 1995, is repeated every four years. The latest version of TIMSS is TIMSS 2019. Countries participating in TIMSS may vary with each release. For example, 64 countries and territories participated in TIMSS 2019. Countries participating in TIMSS collect data on students' learning environments, teaching practices, and students' views on the learning process, as well as students' knowledge and skills in mathematics and science (MoNE, 2020).

TIMSS results provide much valuable information for the education systems of the participating countries. For example, the results reveal students' achievement levels in mathematics and science, helping countries identify their strengths and weaknesses in these areas. In addition, TIMSS results are used to measure and improve the effectiveness of education policies and practices. These results also help develop teacher education and training programs (Badri, 2019; Mullis et al., 2020; Utomo, 2021).

In addition to the TIMSS exams, surveys are also administered to teachers. TIMSS teacher surveys measure teachers' views and experiences regarding education systems, teaching methods, and students' learning levels. TIMSS teacher questionnaires include teachers' assessments of teaching methods, materials, class times, classroom environment, student-teacher interaction, and students' learning levels (IEA, 2018).

TIMSS teacher questionnaires cover teaching methods and materials teachers apply in their classrooms, student-teacher interactions, students' learning levels, and classroom environment (Mullis et al., 2021). The questionnaires also address teachers' views on education systems, the factors that affect students' success, and the challenges in education systems. Education system decision-makers and researchers use TIMSS teacher surveys to help gather information about teachers' views and experiences. These data can be used to identify the strengths and weaknesses of education systems, contribute to developing education policies, and improve teacher education.

Turkish Education System

The Turkish education system consists of 4 main stages: Kindergarten, Primary School, Secondary School, and High School. Education in Turkey is compulsory and free of charge. In the 2022-2023 academic year, the age to start primary school first grade from 5 has been increased to 6 in the applied system. The curriculum determined by the Ministry of National Education (MEB) is applied in the Turkish education system. The education system is based on the central examination system, and students can progress with a specific examination each year. According to the results of the High School Entrance Examination (LGS) held in the last year of high school, students continue their high school education or go to vocational high schools (Parlak, Yildirim & Özdemir, 2019).

Teachers are one of the essential elements in the educational process of students. Teachers' professional competencies are determined in line with the standards set by the Ministry of National Education. Teachers are responsible for planning, implementing, and evaluating students' education. In addition, it is among the teachers' duties to meet students' social and emotional needs, to ensure that students are in a safe learning environment, to set an example for students, and to motivate them (MoNE, 2017).

In recent years, increasing teachers' professional competence has gained importance in the Turkish education system. In this direction, vocational training and development programs are organized to increase the quality of teachers. Teachers are expected to use different learning styles, materials, and methods to meet students' learning needs. In addition, teachers' professional competencies are also regularly evaluated, and additional training is provided when necessary (MoNE, 2017).

Singapore Education System

The Singapore education system is a highly-performing education system worldwide. The education system has a structure that extends to primary, secondary, and university education. It has three levels: primary, secondary, and high. The education system implements a rigorous curriculum to ensure students have an excellent academic background (MOE, 2019). The Singapore education system takes a multidisciplinary approach to ensure students perform at the highest possible level. The main features of this system include discipline, hard work, high expectations, continuous assessment, and student-centered learning (Toh et al., 2019).

In the Singapore education system, teachers are responsible for monitoring students' academic achievement and personal development. Teachers perform tasks such as identifying students' needs, teaching students learning strategies, supporting students' learning process, collaborating with parents, and using educational technologies (MOE, 2012). The Singapore education system applies rigorous examinations and evaluations to determine teachers' professional competence. Teacher qualifications are determined based on various factors, including teacher training programmes, teacher training, teachers' performance, and student feedback. Teachers' professional qualifications are continuously developed to improve the quality of education (MOE, 2019).

Purpose of the Research

This study compares Turkish and Singaporean mathematics teachers' responses to school success-oriented questions using TIMSS 2019 data. This comparison will help better understand the differences and similarities between the Turkish and Singaporean education systems. The research results will help Turkish and Singaporean education system decision-makers, teachers, and researchers identify and improve their education systems' weak points. It will also provide a basis for comparing education systems in other countries. The results of this research will help us better understand the impact of education systems and teaching methods on students' academic achievement. This, in turn, will contribute to developing better education policies and teaching methods, and ultimately help raise more successful students.

Method

This research was conducted under the causal comparison design. The causal comparison model is a model used to examine the causal relationship between two or more variables. This model determines the nature and direction of the relationship between variables and measures the effect of one variable on other variables (Gürbüz & Şahin, 2014). Following the research purpose, the answers given by Turkish and Singaporean mathematics teachers to the questions related to School Emphasis on Academic Success were compared and examined.

Sample

The research study group consists of Turkish and Singaporean eighth-grade mathematics teachers participating in the 2019 TIMSS. 306 Singaporean and 181 Turkish mathematics teachers participated in the 2019 TIMSS. Singaporean teachers' average professional experience is 11.16 years ($SD=8.04$). The average professional experience of Turkish teachers is 10.15 years ($SD=6.68$). The distribution of teachers by demographic characteristics is shown in Tables 1, 2, and 3.

When Table 1 is examined, it is understood that 60.1% of Singaporean teachers are female and 39.9% are male. On the other hand, 53.6% of Turkish teachers are female, and 45.9% are male. It was observed that the

distribution by gender was similar in both countries.

Table 1. Distribution of Turkish and Singaporean Teachers by Gender

		Frequency	Percent	
Gender of teacher	Singaporean	Female	184	60.1
		Male	122	39.9
	Turkish	Female	97	53.6
		Male	83	45.9
		Missing	1	0.6

When Table 2 is examined, it is understood that the majority of Singaporean teachers are in the 25-29 (18%), 30-39 (45.1%), and 40-49 (25.2%) age groups. The majority of Turkish teachers are also in the 25-29 (29.3%), 30-39 (44.2%), and 40-49 (18.2%) age groups. It has been observed that Turkish teachers participating in TIMSS are younger.

Table 2. Distribution of Turkish and Singapore Teachers by Age

		Frequency	Percent	
Age of teacher	Singapore	Under 25	2	0.7
		25-29	55	18.0
		30-39	138	45.1
		40-49	77	25.2
		50-59	25	8.2
		60 or more	9	2.9
	Turkey	Under 25	10	5.5
		25-29	53	29.3
		30-39	80	44.2
		40-49	33	18.2
		50-59	3	1.7
		Missing	1	1.2

When Table 2 is examined, most Singaporean teachers (81.7%) have a bachelor's degree. Similarly, many Turkish teachers stated they have a bachelor's degree (92.8%). While 18% of Singaporean teachers are

graduates, this rate is 6.6% for Turkish teachers.

Table 3. Distribution of Turkish and Singapore Teachers by Education Level

		Frequency	Percent	
Education level of teacher	Singapore	Post-secondary, non-tertiary education	1	0.3
		Bachelor's or equivalent level	250	81.7
		Master's or equivalent level	55	18.0
Turkey		Bachelor's or equivalent level	168	92.8
		Master's or equivalent level	12	6.6
		Missing	1	0.6

Measuring Tool

TIMSS (Trends in International Mathematics and Science Study) is a program that measures the quality of mathematics and science education worldwide. TIMSS aims to measure the knowledge and skills students acquire in mathematics and science and evaluate the effectiveness of education systems. For this purpose, questionnaires are applied to teachers in addition to TIMSS exams. TIMSS teacher surveys measure teachers' views and experiences regarding education systems, teaching methods, and students' learning levels. TIMSS teacher questionnaires include teachers' assessments of the teaching methods, materials, class times, classroom environment, student-teacher interaction, and students' learning levels that they apply in their classrooms (IEA, 2018).

This research used questionnaire items directed to teachers under the title of "School Emphasis on Academic Success" in 2019 TIMSS (IEA, 2018). In the survey, "How would you characterize each of the following within your school?" With the question, teachers are asked to evaluate their colleagues, school administration, school environment, and students. The questionnaire is in a 5-point Likert type (Very high=1, High=2, Medium=3, Low=4, Very low=5) and consists of 12 items. The scores given to the items were reversed so that high scores indicate positive results. For the Singapore sample, the Cronbach's alpha coefficient was 0.89; For the Turkish sample, the Cronbach's alpha coefficient was calculated as 0.90. Accordingly, it can be said that the internal consistency of the answers given to the items is at a high level.

Statistical Analysis

TIMSS 2019 User Guide was used to analyze the data (Fishbein, Foy & Yin, 2021). The skewness and kurtosis coefficients were calculated to examine the distribution of the answers given to the questionnaire items related to School Emphasis on Academic Success. In order to meet the assumption of normal distribution, it is sufficient that the skewness and kurtosis coefficients are in the range of ± 1.5 (Tabachnick & Fidell, 2007). The

calculated coefficients are within the specified range.

Independent groups t-test was used to compare the mean scores of Turkish and Singaporean teachers. Cohen *d* values were calculated to determine the effect size. In general, $d = 0.2$ indicates a "small" effect size, $d = 0.5$ a "moderate" effect size, and $d = 0.8$ a "large" effect size (Cohen 1988). Analyzes were carried out using the SPSS 25.0 statistical package program.

Results

In accordance with the purpose of the research, independent groups t-test was applied to compare the answers given by Turkish and Singaporean mathematics teachers to the questionnaire items related to School Emphasis on Academic Success. Obtained results are shown in Table 4.

Table 4. Comparison of the Mean Scores of Turkish and Singaporean Mathematics Teachers from the School Emphasis on Academic Success Questionnaire.

School Emphasis on Academic Success Items	Country	N	M	SD	<i>t</i> (484)	<i>p</i>	Cohen <i>d</i>
Teachers' understanding of the school's curricular goals	Singapore	306	4.09	0.58	-1.13	0.26	0.10
	Turkey	180	4.16	0.70			
Teachers' degree of success in implementing the school's curriculum	Singapore	306	3.92	0.55	-1.58	0.11	0.14
	Turkey	180	4.01	0.74			
Teachers' expectations for student achievement	Singapore	306	4.00	0.64	4.27	0.00*	0.39
	Turkey	180	3.72	0.83			
Teachers' ability to inspire students	Singapore	305	3.75	0.63	-2.70	0.01*	0.25
	Turkey	180	3.92	0.77			
Parental involvement in school activities	Singapore	306	3.08	0.91	4.47	0.00*	0.41
	Turkey	179	2.68	1.06			
Parental commitment to ensure that students are ready to learn	Singapore	306	3.13	0.87	7.51	0.00*	0.69
	Turkey	180	2.46	1.08			
Parental expectations for	Singapore	306	3.81	0.78	1.32	0.19	0.12

student achievement	Turkey	180	3.70	1.00			
Parental support for student achievement	Singapore	306	3.24	0.81	8.17	0.00*	0.75
	Turkey	180	2.56	1.00			
Students' desire to do well in school	Singapore	306	3.42	0.86	3.01	0.00*	0.28
	Turkey	180	3.18	0.84			
Students' ability to reach school's academic goals	Singapore	306	3.29	0.73	3.30	0.00*	0.31
	Turkey	180	3.06	0.74			
Students' respect for classmates who excel academically	Singapore	306	3.60	0.70	1.24	0.22	0.11
	Turkey	180	3.51	0.89			
Collaboration between school leadership (including master teachers) and teachers to plan instruction	Singapore	306	3.65	0.84	-3.85	0.00*	0.36
	Turkey	180	3.94	0.80			

When the Table 4 is examined, "Teachers' understanding of the school's curricular", "Teachers' degree of success in implementing the school's curriculum", "Parental expectations for student achievement" and "Students' respect for class who excel academically" score averages did not show a significant difference according to the countries ($p>0.05$). Singaporean and Turkish teachers expressed similar opinions about their schools regarding the level of teachers' understanding of the school's curriculum goals, teachers' success in implementing the school curriculum, parental expectations for student success, and their students' level of respect for their classmates.

In addition, "Teachers' expectations for student achievement", "Teachers' ability to inspire students", "Parental involvement in school activities", "Parental commitment to ensure that students are ready to learn", "Parental support for student achievement", "Students' desire to do well in school Students' ability to reach school's academic goals", "Collaboration between school leadership and teachers to plan instruction" score averages showed a significant difference according to the countries. ($p<0,05$). Compared to Turkish teachers, Singaporean teachers expressed more positive opinions about their schools on teachers' expectations for student success, parents' participation in school activities, parental support for the teaching process, students' desire to be successful, and students' ability to achieve academic goals. On the other hand, Turkish teachers had more positive opinions about their school than Singaporean teachers regarding teachers' ability to inspire students and

cooperation among teachers to plan teaching. The scores of Singaporean and Turkish teachers from the questionnaire items are presented visually in Figure 1.

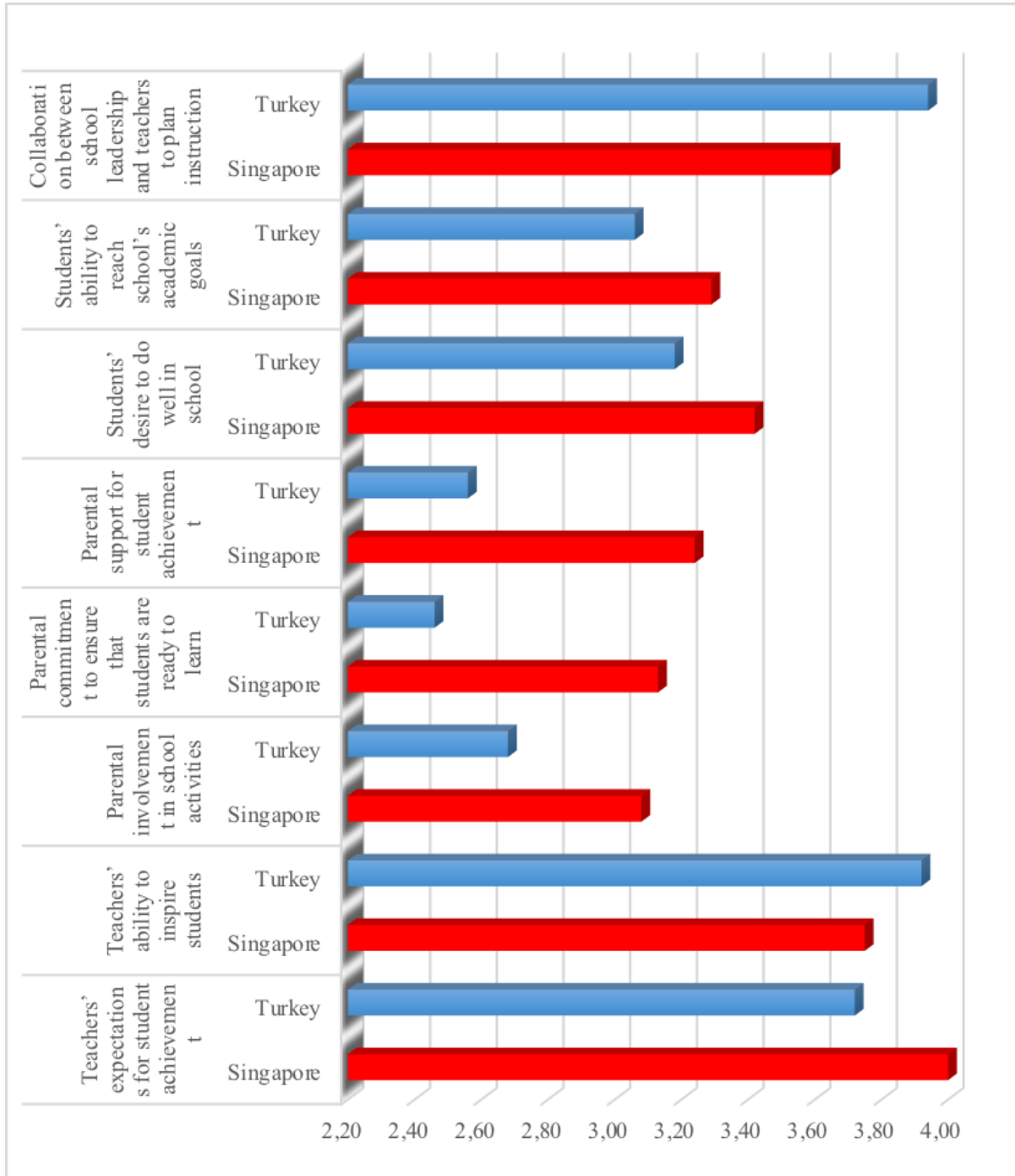


Figure 1. Scores of Singapore and Turkish Teachers from School Emphasis on Academic Success Questionnaire

Conclusion and Recommendations

This research aims to compare the answers given by Turkish and Singaporean mathematics teachers to questions

about school success. This research was conducted by the causal comparison design. The research study group consists of Turkish and Singaporean eighth-grade mathematics teachers participating in the 2019 TIMSS. As a data collection tool, questionnaires were directed to teachers under the title "School Emphasis on Academic Success" in 2019 TIMSS. TIMSS 2019 User Guide was taken into account in the analysis of the data. Independent groups t-test was used to compare the mean scores of the teachers from the questionnaire items. A significant difference was found between the average scores of Singaporean and Turkish teachers from some survey questions.

According to the results, Singaporean teachers expressed more positive opinions about their school than Turkish teachers on teachers' expectations for student success, parents' participation in school activities, parental support for the teaching process, students' desire to be successful, and student's ability to achieve academic goals. On the other hand, Turkish teachers had more positive opinions about their school than Singaporean teachers regarding teachers' ability to inspire students and cooperation among teachers to plan to teach. This difference shows that the Singaporean education system, compared to other countries education systems, has an educational approach that gives importance to student success and the necessary elements to achieve success. This means that Singaporean teachers do more to increase the success of their students, and parents are actively involved in this process. On the other hand, Turkish teachers' more positive opinions on inspiring students and cooperation among teachers indicate that the Turkish education system puts more effort into these issues and tries to motivate students more.

The results obtained in the study showed that the Singaporean and Turkish education systems have different priorities and emphases. Both education systems have strengths and have things to learn from the other. Therefore, learning from each other and sharing best practices can help all students learn better and succeed. In the literature, some studies deal with the Turkish education system, teacher education system, and student achievement with comparative approaches based on international exams (Özerbaş & Safi, 2022a; Özerbaş & Safi, 2022b; Uzun, Tümer & Yiğit, 2010). International exams offer a wide variety of rich data sources. More comparative studies are needed to understand better the possible reasons for the differences between countries' international test scores and to improve the Turkish education system.

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Linguaculturology as an Optimal Approach in Studying Foreign Languages in a Multicultural Diverse Classroom


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Abstract: We live in the age of globalization where diverse cultures and nations mix and mingle. A lot of us live in a multicultural society in which macro- and microethnoses coexist. Cultures enrich each other, collaborate...and sometimes clash. Misunderstandings happen when people speak the same language, but do not share the same cultural codes. Edward Sapir, father of Sapir-Whorf "linguistic relativity theory" stated that "every cultural pattern and every single act of social behavior involve communication in either an explicit or an implicit sense." In the core of any successful verbal or nonverbal communication lays "a shared code," which contains mutual knowledge of traditions, culture, context, and connotations. Thus, by just mastering a grammatical structure and obtaining an extensive vocabulary it is not enough for a foreigner/language learner. "Foreign languages should be taught as the inseparable unity of the world and culture of the people speaking those languages," claims Svetlana Ter-Minasova, professor at Lomonosov Moscow State University. That is why we see the linguacultural approach in teaching foreign languages could be the solution and the remedy helping to avoid misunderstandings. Linguaculturology is a relatively new type of synthetic, scientific discipline which offers the most harmonious and synergetic approach in studying foreign languages and helping avoid cultural misunderstanding. It commenced at the intersection of culturology (cultural anthropology), ethnolinguistics, sociolinguistics, and cognitive linguistics. Linguaculturology as a metascience seeks to understand the world of human culture, not as a set of isolated facts, but gives a systematic description of facts in language and culture, studies their mutual connection and interaction in their functioning and reflecting the process as a holistic structure. This article demonstrates how the linguacultural approach, its methods and strategies can help educators to overcome challenges in a diverse and multicultural classroom, while making the learning process more inclusive and culturally aligned.

Keywords: Multicultural, Communication, Ethnos, Linguoculturology, Bilingualism

Citation: Paul-Kirokosyants, G. & Vorobyov, V. (2023). Linguaculturology as an Optimal Approach in Studying Foreign Languages in a Multicultural Diverse Classroom. In M. Shelley, M. Unal, & S. Turgut (Eds.),

Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences (pp. 402-413), Denver, CO, USA. ISTES Organization.

Introduction

The era of globalization has led to a mixture of cultures and nations, so that in the space of one macroethnos, numerous microethnoses coexist, developing and interacting. In a multicultural space, the language of a macroethnos, as a rule, becomes a means of communication. But communication in the language of the prevailing language group becomes insufficient and intercultural misunderstandings often occur. The realization of the culture phenomenon happens when you learn to use a non-native language. We discover there is not one culture, or that every culture unfolds in multiple layers of subcultures. It is obvious that simply knowing the grammatical structure of the language and having an extensive vocabulary is not enough to achieve mutual understanding.

In English there is a word "alien". It means both an alien and a foreigner. That is, another country is another planet, another world, another culture. And in this other culture there are other values, and other rules, other traditions, other memes, a different way of life, other gestures. For example, 'diversity and inclusion' is one of the most important priorities especially in US metropolitan areas and universities. The fusion of numerous cultures, religions, ethnic groups and languages in a seething melting pot requires close attention, analysis and tactics to avoid misunderstandings and conflicts.

Culture and Language

“Cultures run around the planet like so many billiard balls, self-contained objects that might collide or bounce off the cushion but still retain that perfect shape.” (Michael Agar, 2002)

According to E. Sapir, "every cultural system and every single act of social behavior explicitly or implicitly implies communication." (Edward Sapir, 1935) Communication is the process of interaction (verbal or non-verbal). Each communication is based on a mutual “shared code”, i.e., mutual knowledge of realities, memes, context. In both mono- and multicultural space, the main means of transmitting information and achieving mutual understanding is language.

Language is a transmitter, a conductor of culture; it itself already contains cultural and worldview codes that form the personality of its bearer, its identity. A native speaker already at a subconscious genetic level receives knowledge about his own culture. But a foreigner who has studied and mastered the language at a decent level does not obtain this cultural knowledge.

W. von Humboldt stated that “the sum of all words, language is a world lying between the world external

phenomena and the inner world of a human <...>; studying language reveals to us, in addition to its own use, also, an analogy between man and the world in general and every nation that expresses itself in language” (Wilhelm von Humboldt, 1960). According to Humboldt, language is the repository of the national spirit, culture, "the united spiritual energy of the people, miraculously imprinted in certain sounds" (Wilhelm von Humboldt, 1960).

Language always embodies the originality of the people, their visions of the world, their native culture. "Studying the languages of the world," emphasized W. Humboldt, "- this is also the world history of thoughts and feelings of humanity. It should describe the people of all countries and all degrees of cultural development; it should include everything which concerns a person". (Wilhelm Humboldt, 1960).

Clash and Merge of Lingua Cultures

Now more than ever, we feel the clash of worlds, cultures, and spiritual values. G.D. Gachev wrote that “at the junction of languages, the most acute clash of lifestyles and material and spiritual cultures is expressed - but a clash that occurs not just in life, but at the level of consciousness, understanding of life” (G.D. Gachev, 1988, c.36).

There are different microcultures within one monolingual group, and it is very easy to perceive situations or to get misunderstood using the same language even with people out of the same cultural or social cluster. We think of culture as something which belongs to a particular group of people. “Culture starts when you realize that you’ve got a problem with language, and the problem has to do with who you are.” (Michael Agar, 2002).

As educators, in the beginning of our careers, we think that nothing is easier than to translate and explain new words or concepts. We think that the meanings lay there, on the surface of our visual minds, floating in the field of our awareness. And then we start to explain well-known words and concepts and see several possibilities you never thought about. Thus, trying to explain our native tongue concepts, we get the gift of looking at our native language through the prism of a new complex awareness. Comprehension of different cultural aspects changes us into educators who can navigate the multicultural classroom nowadays.

Linguaculturology or Cultural Linguistics

The problem of interpersonal and intercultural contacts and linguistic worldview was and is being dealt with by such scientists as V. Hanks, G. Urban, M. Agar, J. Lucy, R. Langaker, E. Sapir, B. Whorf, G. Gachev, Ch. Fillmore, and E. Erickson. Linguaculturology, or cultural linguistics as a metascience offers methods for solving the above problems in teaching foreign languages. This is confirmed by the continuing contribution to cultural linguistics by such scientists as C. Pierce, G. Palmer (G. Palmer 1996), the founder of the linguaculturology school V. Vorobyov, S. Ter-Minasova, and many others.

If we take a closer look and take in account parameters such as volume of semantics, stylistic connotations, and lexical compatibility, we would draw a conclusion that equivalency of languages doesn't exist. Word as a unit of language corresponds with a certain item or a phenomenon of a real world. But those items or phenomena could be different in various cultures. Cultural concepts of those items and phenomena will be different as they exist and function in different worlds and cultures. Linguaculturology as a metascience seeks to understand the world of human culture, not as a set of isolated facts. It gives a systematic description of facts about language and culture, studies their mutual connection and interaction and their functioning and reflecting the process as a holistic structure of units. Linguaculturology is a metalinguistic science which gives a systematic description of the facts of the language and culture in their interaction. Thus, cultural linguistics or linguaculturology originated at the intersection of related sciences such as cultural studies, anthropology, linguistic regional studies, sociolinguistics, ethnography and cognitive linguistics. But this branch of science has its own special character, and special "integrative aspect" of studying the subject of language and culture.

Newspeak

Also, when translating from the native into the second language and vice versa, a new language is created, and reached with new signed connotations, memes, images and memes of the area where new variation of the new language (third dimension) Newspeak is born. The introduction of slang and dialect words should also be considered in order to understand the process of the emergence of the Newspeak. Thus, we deal no longer with a binary, but at least a three-part relationship between the native language, the new country tongue and the neologized variation of the native language.

In courses of foreign culture, cultural and historical images often remain misunderstood, adjusted to the tracing paper of universal world standards, or to their usual perception of being. Thus, there happens to be a substitution of concepts. Our students nod their heads knowingly but laugh and smile at something of their own. When asked to retell what they saw or read, a different story comes to light. Our ability to translate into different languages is trained by daily intralingual translation within our native language: we paraphrase by retelling and "understanding" another narrator. W. Hanks (W. Hanks, 2014) argues that intracultural translation plays a constitutive role in the social life of any human group. We are trying to display someone other's world using the mirror of our worldview. It is natural that when there are similar analogues in their native culture, students understand the material better.

Cross-Lingual Translation

What happens in the process of cross-cultural translation? William Hanks (W.Hanks, 2014) calls the process of cross-cultural or cross-linguistic translation a metalinguistic process that occurs in the space of asymmetric differences and produces changes in one or both languages. The primary picture of the native language world is superimposed by the secondary world's image of the studied language. The second world image commences by

studying foreign language and culture, and it is not the image reflected by the language, but the image created by the language. That is why studying a foreign language requires a certain bipolarity of a student. Interaction of primary and secondary images of the world is a complex psychological process requiring certain refusing from habitual self-identification and adjustment to the foreign vision of the world.

The necessity of rebuilding usual way of thinking, reshaping your familiar picture of the world by a weird, unusual example, is one of the most difficulties of comprehending and mastering a foreign language. Under the influence of the secondary world image happens reformatting of an individual. A person speaking several languages passes from one language to another changing the way and the direction of his/her thought.

One of the difficulties in teaching or understanding a foreign language is that every word in every language has its own belonging only to that lingua circle or a reserve of compatibility with other words. This compatibility is unique for each language, and it is not universal by any means. Another difficulty consists in a conflict between different cultural concepts in various languages about the items or reality phenomena which are denoted with "equivalent" words in those languages' words can be translated easily but carry different connotations.

Critics of E. Sapir's theory of relativity sometimes argue that it is impossible to learn and even understand a foreign language. They are only partly right, bearing in mind the fact that cross-lingual translation often leaves aside the unique structures and meanings of the language, aligning itself with the universal grammatical-semantic pattern.

Identity in a Multicultural Society

E.Erikson (E.Erikson, Identity) argued that the crisis of personal identity is inevitable in a multicultural society. We could agree with him only in part. Any crisis that has been overcome is just growing pains and an inevitable condition for the transition to another stage of development.

The statement of the great German poet and scientist I.W. Goethe that, not knowing a foreign language, a person is not able to understand his own proves as the right one through the centuries. Having learned another language, moving to another world, another space, we get the gift of looking at our native world from the outside, from the stage. Therefore, it is hardly possible to talk about the loss of individuality or identity in a multicultural space.

The American concept of "melting pot" does not mean the loss of identity, but the enrichment of each member of a multicultural society is due to the identity of fellow citizens. It is interesting how, over the generations, different ethnic groups retain their culture, language and way of life and form inter-ethnic subcultures with their intermediate sub-languages (Spanglish, Germlish etc.), art and cuisine (TexMex, Creole). At least a third or even half of our students are multilingual and belong to different ethnic communities.

Multilingualism or Bilingualism

Professor Greg Urban of the University of Pennsylvania states, “we are a plurilingual nation”. (Urban, Metaculture; 2001) Multilingualism (multilingualism), which many continue to call bilingualism, is a ubiquitous phenomenon, and most of the world's population, according to the UN, is bi- or multilingual. I think it is appropriate to call the sublanguage of any bilinguals according to the same principle as Spanglish, just adding +lish to the language of origin.

The bilingualism of our students can be divided into three types:

1) Subordinative bilingualism - the second language is perceived through the prism of the native, the so-called "tracing" of consciousness and reflection of reality. All concepts correspond literally with the lexemes of the native language. This type of bilingualism is mainly characteristic of first-wave immigrants, entry-level students.

2) Pure or coordinative bilingualism implies complete equality and autonomy of the two languages, each has its own set of concepts, the grammatical categories of the two languages are independent. This type of bilingualism is rare, because the process of some kind of diffusion and interpenetration of languages/worlds is natural and inevitable.

3) Mixed bilingualism implies a single mechanism for the analysis and synthesis of speech, coexisting languages that differ only at the surface level. This type of bilingualism is typical for students who grew up in families belonging to micro ethnic groups. For example, someone who grew up in an Armenian family can understand the language and use it at a ‘home’, on the everyday level, recognizing some elements of Armenian culture if it was taught to him by representatives of the older generation. That is, the language and culture of the family and the language of society coexist simultaneously, in the case of my students, English.

Cross-Lingual or Cross-Cultural Translation and the Newspeak.

Also, when bilinguals communicate in their native language, a cross-lingual translation is used. Cross-lingual translation, as noted by Hunt (Hunt, 2014), Peirce (Ch. Peirce, 1940) and Jacobson (Jacobson, 2004), creates new meanings, new ways of assessing speech, new use of old images (Hunt, 2014). Germlish (German+English), Spanglish (Spanish+English), Armlish (Armenian + English) are also characterized by newspeak, when the morphological devices of one language and the some of another are mixed to form new words. Or just the concepts of the new society are woven into the fabric of the native or 'family' language, often tracing the control of the verb.

Also, when translating from native to second and vice versa, a new language is created, enriched with new

signs, images, and memes of the area where a new variation of the native language (newspeak) is born in one, separate micro-ethnos. The introduction of slang and dialect words should also be considered in order to understand the process of the emergence of Newspeak. That is, we are no longer dealing with a binary, but at least a three-component relationship between native, English, and a neologized variation of the native language. All these processes are immensely interesting for a scientist-researcher of the formation of micro languages and newspeaks, but still without leading to a common denominator, without teaching students the norms of the foreign literary language, new generations of bilinguals living abroad may gradually lose touch with the very core of the original culture.

I would never have thought that folk tales could be alike each other and monotonous. It turns out they can! When translated into English, a lot of ethnic folk tales have lost all their original beauty. All originality, all unique dialect disappeared, leaving the dull frame of a simple monotonous plot. Students who took only one class of folklore in English were not lucky enough to fully understand and feel the beauty of ethnic folk art, because this course was not given in conjunction with the language and history. Languages should be studied “in inseparable unity with the world and culture of the peoples who speak these languages,” “Each foreign language lesson is a crossroad of cultures, it is a practice of intercultural communication, because every foreign word reflects a foreign world and a foreign culture, behind every word there is a national consciousness ... idea of the world.” (S.Ter-Minasova, 2000). She also believes that “native culture is both a shield that protects the identity of the people and a blank fence that fences off from other cultures.” (S.Ter-Minasova, 2000). So how do you get over that fence?

Linguacultural Approach as a Solution

How to create a true second/parallel picture of the world for students studying new culture and new language in a multicultural and often multilingual space? Of course, using a comprehensive linguistic and cultural approach. And this combined approach is offered by a relatively new discipline, called linguaculturology, or cultural linguistics. The new synergetic science commenced at the end of the 20th century on the edge of anthropology, cognitive linguistics, ethnography, and ethnosemantics.

The linguaculturological approach to the study of foreign culture, history, and literature in conjunction with the study of grammar provides an opportunity to present a full range of knowledge for students who wish to plunge headlong.

V.V. Vorobyov emphasizes that “today it can already be argued that linguoculturology is a new philological discipline that studies a set of cultural values selected and organized in a certain way, explores the living communicative processes of generating and perceiving speech, the experience of a linguistic personality and national mentality, gives a systematic description of the language picture of the world and ensures the fulfillment of educational, upbringing and intellectual tasks of learning” (Vorobyov, 1997).

Linguaculturology as a Science

Indeed, linguaculturology is a complex scientific discipline of a synthesizing type that studies the relationship and interaction of culture and language in its functioning and reflects this process as an integral structure of units in the oneness of their linguistic and extra linguistic or cultural content using system methods and with the focus on modern priorities and cultural institutions (system of norms and universal values). In our opinion, linguaculturology is the new research paradigm for the movement of scientific and cultural thought about language and culture. It does not only expand the scope of a research idea, but it allows a deeper and more comprehensive approach in its possibilities and reserves. It is far from easy to implement the principles of a systematic approach in linguaculturology.

It seems that it is advisable to carry out a holistic and systematic description of the object under consideration, using the term U. Eco, within the framework of the semiotic field as a research model (U. Eco,1972). Then culture can be represented functionally in the form of special communication 'Kultur als Kommunikation' which is explained through the corresponding metalanguages and constructed by means of their units. "Semiotics explores all cultural processes as processes of communication" (U. Eco,1972). This aspect requires special attention, especially when it comes to the analysis of extra linguistic content, for example, culture in our study: this is the relation: sign-unit-object. The German logician and semiotician G. Klaus singled out an extremely important for us aspect of semiotics:" linguistic sign however has not only the function of designation, it denotes (names) something.

Semiosis

Linguacultural units (signs and their meanings) are given to us in the process of their functioning, in semiosis, in which founders of semiotics C. Pierce, C. Morris and others, based on views of their predecessors, identified three components: 1) sign (sign), 2) designatum, 3) interpretant and, in addition, 4) an interpreter (Morris, 1938).

That is: 1) a sign means, for example, a sound or a written word, 2) a class of objects (in the case when the object exists as a real object, it is a denotation), 3) a meaning, a content of the sign, and 4) a subject.

In modern semiotics, three levels of study of sign systems are usually distinguished and, accordingly, three of its aspects: 1) syntactics, which studies the relationship between signs and ways of using them, 2) semantics, which studies the content side of signs, their meaning, and 3) pragmatics, the subject of which is the consideration of the relationship between sign systems and those who perceives, interprets and uses the messages they contain.

However, this traditional scheme leaves aside one aspect that is implicitly present in semantics, but requiring special attention, especially when it comes to analysis outside of linguistic content, for example, culture, as in

our study: this is the relationship "sign (unit) - object".

Sigmatics

The German philosopher, logician, and semiotician G. Klaus singled out one more aspect of semiotics, and the fourth one that is extremely important for us: "The linguistic sign, however, has not only the function of meaning, but also the function of something.

For example, the expression "fixed star" denotes the class of suns. This notation can be expressed symbolically by the relation $R_3(Z, O)$ or vice versa by the relation $R_3(O, Z)$, where Z is a linguistic sign, and O is an object (individual, class objects, the relationship between them (1) <...> Figuratively speaking, signs - these are the "labels" of objects <...> Relations $R_3(Z, O)$ and $R_3(O, Z)$ are characterized as "sigmatic" ones, where: 1) R_3 - symbol of sigmatic relation [V.V.], R_2 - semantic, R_1 - syntactic. R_3 characterizes the sigmatic relation. The discipline that studies these relationships is called sigmatics." (Klaus, 1967, p.15-16). Thus, we can talk about four aspects of the model of semiotic description of objects:

Figuratively speaking signs are "labels" of objects. Thus, we can talk about a four-aspect model of semiotic describing of objects:

sign- sign- syntactics

sign- meaning- semantics

sign- object- sigmatics

sign- human- pragmatics

And the fruitfulness of this approach is explained by the fact that all components of semiosis are organically connected. The allocation of sigmatics is extremely important for the study of linguacultural problems since it is a way out into the subject-conceptual, extra linguistic world. "Language semantics are limited due to the generalizing nature of the realema which is the invariant of realities, that unchanging and the central, that is characteristic of all objects of this class" (Tolstoy, 1968). Where the actual linguistic content of the word or unit is limited only by pointing to the realema, then the linguacultural logical definition is precisely aimed at revealing the class of designated objects in all their cultural specifics.

Method of Studying Lingua Cultural Objects

The systematic method of studying linguacultural objects in the unity of semantics, sigmatics, syntagmatics, syntactics and pragmatics makes it possible to obtain a holistic view of them as units in which proper linguistic and extralinguistic content are dialectically connected. The semantic aspect of the semiotic research model reflects the linguistic content of the unit, the sigmatic - its reference, the syntactic aspect reflects the fixation of the unit in the system and the paradigmatic reflects its influence on a person.

The general ratio of factors that determine the linguaculturological meaning is a modification of the scheme of semantic units:

meaning-----concept	area of
	material and spiritual
sign-----unit	culture

The general symmetric model of interpretation of linguaculturological objects should be concretized when considering concepts “linguacultureme” and “linguaculturological” field.

Linguacultureme

The unit of interaction of language and culture is the concept. Concepts are reflected in language only partially; so, the task of the linguist is to explore that part of the concept, which is verbalized in language, while considering language as a medium of representation of meanings. Concept is the meaning embodied in the word by the subject of this word based on the existing in-culture ideas about the ways of implementation of that sense.

Linguacultureme is a complex inter level unit, or a unity of linguistic and extralinguistic content. This unit is deeper in its meaning than a word. The sign system of linguaculturemes should reveal the system of real knowledge about culture, presented in the form of a model in which the actual linguistic “picture of the world” deepens to the linguo-culturological “picture of the world” as a competence.

The signs are consistent with each other due to the dialectical connection of language and thinking as a reflection of the world, linguistic and linguaculturological.

Linguacultureme can be seen as a special micro frame - a block of knowledge about culture, expressed by the corresponding language form and presented at the language level. "Minimal content" - a sign - a lexical meaning, and the system-functional aspect of the field - as a structure of such micro frames.

Cognitive structures thus form the basis of not only knowledge, but also meanings. The modeling of such processes helps to reveal the entire system of linguistic cultures as micro frames in each field. A cognitive model, considered as a deep level of a micro frame, is the result of the linguo-creative activity of a given linguistic society, reflecting the vision of the designated “object” of material or spiritual culture in the corresponding system.

Thus, we should seek to provide our students with linguacultural competence as a system of knowledge about culture, embodied in a certain national language.

Lingua Culturological Dictionaries

Linguists in various countries work on creating linguaculturological dictionaries. It is quite a complex task as they need to define linguacultures within one “national” language field, which is difficult in our age of multiculturalism. Regarding the linguoculturological dictionary, the characterological approach is as follows: the first step is to define the cultural type in the most general terms, which is a problem in itself. In a ‘typical’, i.e. characterizing the culture under study in the area of mechanisms operating in it, then it is necessary to single out significant cultural areas specific to it. The ‘search’ of the lingua cultures that make up the dictionary, therefore, will be carried out by taking into account cultural meanings on the basis of their own ‘internal’ characteristics of lingua cultures. The list of linguistic cultures in the dictionary obtained in this way, even if the list is open, can give the characterology of the culture of this type from the side of vocabulary. The discovery of several groups of linguoculturemes which differ in their nature and basic properties, is also possible, and this is also the characterology of culture.

This is a way to define the linguistic cultures of the dictionary as such, and, on the other hand, the very procedure of searching for linguistic cultures, as well as identifying the principles of formation and essential features of the dictionary, are the characterology of the studied linguistic culture. This type of thesaurus should help with establishing linguaculturological competencies of students studying foreign languages, and give them a holistic view of the new language world.

Conclusion

Meanwhile, creating harmonious strategies for education in a multicultural diverse classroom is a process in progress. Linguaculturally aligned teaching of foreign languages and cultures should involve different disciplines, reflecting different sides of relationship between language and culture: history, philosophy, literature of the studied languages among with ethnolinguistics and cultural linguistics. The role of each of these disciplines in education requires a separate, detailed consideration, and provides scientists and pedagogues with a lot of interesting work in the future.

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The Association between Sexual Violence Victimization, Prescription Drug Misuse, Bullying Experience and Suicidal Behaviors in a National Sample of Adolescents

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Abstract: Suicide is a global public health concern. The interplay of the multiple risk factors (sexual violence victimization, prescription drug misuse, bullying experience) with adolescents' suicidal behaviors has not been studied extensively. The purpose of this study is to examine the association between sexual violence victimization, prescription drug misuse, bullying experience, and suicidal behaviors in adolescents in the United States, by using the 2019 National Youth Risk Behavior Survey (YRBS) data. The national YRBS, conducted by the Centers for Disease Control and Prevention (CDC), provides nationally representative data on adolescents from public and private schools. Students from 9th to 12th grade are included in the YRBS survey. In this study, 8266 usable questionnaires from the 2019 National YRBS were analyzed. Descriptive statistics were used to analyze all pertinent demographic variables. Multiple regression analyses were conducted to detect the association between sexual violence victimization, prescription drug misuse, bullying, and suicidal attempts among adolescents. Regression analysis indicated a strong association between sexual abuse and suicide attempts. Moreover, the interactive impact of prescription drug misuse with sexual abuse experience is highly correlated with suicide attempts. However, the experience of cyberbullying along with prescription drug misuse decreases suicide attempts. Significant gender differences were also observed in regression analysis.

Keywords: *Adolescents, Suicide, Sexual Violence, Cyberbullying, Prescription Drug Misuse*

Citation: Dipti, S.M., Reena, I., Foreman, J.J., & Lyman, S. (2023). The Association between Sexual Violence Victimization, Prescription Drug Misuse, Bullying Experience, and Suicidal Behaviors in a National Sample of Adolescents. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 414-427), Denver, CO, USA. ISTES Organization.

Introduction

Suicide is a significant global public health concern with detrimental mental, social, and economic consequences (Baiden et al., 2020). Globally, suicide poses a health challenge with over 700,000 deaths annually (World Health Organization [WHO], 2021). In the United States, suicide rates have increased by approximately 30% between 2000 and 2017. The term 'suicide' was coined in 1643, derived from the Latin words SUI, meaning self, and CIDE, meaning murder, reflecting the act of self-murder (Guo, 2013). Suicidal behavior often accompanies with feeling of hopelessness, depression, and self-destructive behaviors (Castle & Kreipe, 2007). The severity of one's suicidal behavior increases the likelihood of death by suicide (Mazza & Reynolds, 2008). The interpersonal-psychological theory of suicide suggested that intense pain, violence, accidents, or injuries can contribute to the development of deliberate self-injury (Joiner, 2009; Karaman, 2013).

Suicidal thoughts and attempts are more prevalent than actual deaths by suicide (Centers for Disease Control and Prevention [CDC], 2022a; Miller & Prinstein, 2019). In 2020, 1.2 million people attempted suicide, resulting in 45, 979 deaths (CDC, 2022a). Furthermore, suicide not only leads to death but also causes injuries, self-harm, poisonings, or overdoses, resulting in visits to the Emergency Department (Yard et al., 2021). Importantly, the actual number of suicide attempts may be underestimated if no medical treatment is sought. These trends highlight the urgent need for comprehensive strategies to address and prevent suicide, particularly among at-risk populations, adolescents.

Suicide among Adolescents

Adolescents and young adults undergo a challenging transitional period characterized by new identities, independence, and dynamic social circumstances (Xiao et al., 2021). This transition, combined with biological, hormonal, and psychological changes leads to increased stress. The shifting social positions during this phase also raise the risk of anxiety and depression in teenagers (Karaman, 2013; Miller & Prinstein, 2019). In the United States, adolescents and young adults aged 10–24 years are particularly vulnerable to suicidal behavior (Ivey-Stephenson et al., 2020). Suicide was the second leading cause of teen deaths in the US in 2020 (National Institute of Mental Health [NIMH], 2022).

The prevalence of suicide attempts among youths has increased from 6.3% to 8.9% between 2009 and 2019 (Ivey-Stephenson et al., 2020). Youth who attempt suicide are more likely to repeat their attempts, increasing the risk of eventual death (Berman et al.2006; WHO, 2021). Recent national data shows that 18.8% of high school students seriously considered suicide, and 8.9% of them attempted it (Ivey-Stephenson et al.). In 2018 alone, 95,000 youths aged 14 to 18 years sought emergency care for self-harm injuries resulting from suicide attempts (CDC, 2020a).

Suicidal behavior in adolescents can be influenced by various risk factors, including biological, psychosocial,

economic, political, and cultural factors (Banyard & Cross, 2008; Xiao et al., 2021). Individual-level risk factors for adolescent suicide include mental disorders, depressive symptoms, physical trauma, emotional abuse, bullying, substance use disorders, and sleep disturbances (Basile et al., 2020; Bounds et al., 2019; CDC, 2022a; Hill et al., 2018). Previous suicide attempts, emotional reactivity, and aggressive-impulsive behavior can also trigger suicidal tendencies (Baiden, Kuuire et al., 2019). Family processes like parental depression, parental suicidal behavior, poor communication, or family violence can also contribute to suicide (Bilsen, 2018; Youth Report, n.d.). Specific life events like interpersonal losses, adverse childhood experiences, as well as experiencing any stressful event can initiate suicidal thoughts in adolescents (Bilsen, 2018; Cash & Bridge, 2009; Liu et al., 2019). Societal risk factors include socio-economic changes, inequality, and political impact (Youth Report, n.d.; Xiao et al., 2021). Furthermore, the age or maturity of adolescents plays a role, as students in higher grades have higher suicide attempt rates compared to those in lower grades (CDC, 2020b).

Sexual Violence and Suicide among Adolescents

Sexual violence has negative effects on the physical and mental well-being of adolescents, leading to various negative behaviors (CDC, 2022b). Research indicates that victims of sexual violence, both male and female, are more likely to engage in harmful habits such as smoking, alcohol consumption, drug misuse, and marijuana abuse (Basile et al., 2020; Champion et al., 2004; Cho et al., 2021). They are also prone to misusing prescription pain medication and experiencing persistent feelings of sadness, hopelessness, and suicidal thoughts. Furthermore, sexual violence impacts adolescents' sexual health behaviors, with victims being more likely to engage in risky practices, including having multiple sex partners and engaging in unprotected sexual activities (Haynie et al., 2013). Academic performance, sports participation, and cognitive abilities also suffer as a result of sexual violence. Survivors of sexual violence face physical, psychological, and societal trauma, putting them at risk of developing affective disorders such as PTSD, depression, substance abuse, anxiety, and engaging in suicidal behavior (Basile et al., 2020; CDC, 2022a).

The desire to escape the suffering and trauma caused by the abusive experience increases the likelihood of suicidal attempts among adolescents (Miller & Prinstein, 2019). Childhood sexual abuse is particularly associated with suicidal behavior in this age group (Serafini et al., 2015; Brockie et al., 2015). Recent studies have found a significant correlation between experiences of sexual victimization and later suicide behavior, with victims exhibiting higher rates of suicidal thoughts and attempts in their middle age (Thompson et al., 2019). Overall, sexual violence has profound and long-lasting consequences on the lives of adolescents, affecting their physical and mental health, as well as their overall well-being.

NUPD (Nonmedical use of prescription drugs) and Suicide among Adolescents

Prescription drug misuse (PDM) refers to the improper use of prescription drugs, such as taking them in higher doses or more frequently than prescribed or using them to experience euphoria (National Institute of Drug Abuse [NIDA], 2018; Substance Abuse and Mental Health Services Administration, [SAMHSA], 2020).

Commonly misused prescription drugs include Codeine, Vicodin, OxyContin, Hydrocodone, and Percocet. Among young adults, prescription drug misuse often occurs in social settings (Baiden & Tadeo, 2020). The misuse of prescription drugs has been on the rise, with the number of prescriptions doubling between 1999 and 2011. In 2019, about 2.3% of adolescents (approximately 567,000 individuals) misused prescription pain relievers (SAMHSA, 2020). Opioid-related suicides have also doubled over the past 15 years (Esang & Ahmed, 2018). In 2020, overdose involving opioids killed nearly 69,000 people and over 82% of those deaths involved synthetic opioids (Hedegaard et al., 2021). The self-medication hypothesis suggests that substance use is driven by an inability to cope with strong negative emotions (Espelage et al, 2018). Accordingly, individuals who have experienced sexual violence or teen dating violence often turn to prescription drugs to cope with the trauma. Substance abuse can lead to negative psychological effects and impair decision-making abilities. The misuse of prescription drugs has serious consequences, including drowsiness, unconsciousness, overdose, and death (Jessell et al., 2017).

Bullying and Suicide among Adolescents

Bullying is unwanted aggressive behavior that involves a power imbalance and is repeated or likely to be repeated (Gladden et al., 2014). Traditional bullying includes verbal abuse, physical acts, and spreading rumors in settings like schools (Yang et al., 2021). Cyberbullying, which occurs through digital devices, intentionally irritates someone using technology platforms like social media (Hinduja & Patchin, 2019). Both school bullying and cyberbullying contribute to increased substance use among adolescents, including binge drinking and cannabis use. They also predict negative outcomes such as cigarette smoking, alcohol use, marijuana use, illicit drugs, suicide ideation, suicide attempts, and poorer psychological adjustment (Baiden & Tadeo, 2020; Kuehn et al, 2018). Cyberbullying victimization is strongly linked to substance use, supporting the self-medication theory that substances are used as a coping mechanism for bullied adolescents (Baiden & Tadeo). Research has emphasized the connection between bullying and suicidal behaviors, as well as the correlation between bullying and psychological adjustment issues globally (Hinduja & Patchin, 2019).

Aim

Problem-behavior theory suggests that engaging in one problem behavior increases the likelihood of involvement in other problem behaviors, explaining the overlap between substance use, sexual violence, suicide, and other risky behaviors (Jessor et al., 1977; Karaman, 2013). Correlations have been found between sexual violence victimization and prescription drug misuse, as well as between bullying and substance use disorder (Ashrafioun et al., 2017; Baiden & Tadeo, 2020; Jessell et al., 2017). However, the relationship between these co-occurring behaviors and suicide attempts remains relatively unexplored. The study aims to examine this correlation guided by the following hypothesis:

1. Adolescents with experience of both sexual violence and non-medical use of prescription drugs for self-medication will exhibit either a lower or higher number of suicide attempts.

2. Adolescents who have experienced bullying and engage in non-medical use of prescription drugs for self-medication will either have a lower or higher number of suicide attempts.

Method

The National Youth Risk Behavior Survey (YRBS) conducted by the CDC, along with state-level, local, territorial, and school-based surveys. Established in 1990, YRBS has been gathering data biennially since 1991. The objectives of YRBS include determining the prevalence of health risk behaviors, tracking changes over time, examining the co-occurrence of behaviors, and providing comparable data at various levels (CDC, 2020b). In this study, secondary data were collected from the 2019 National YRBS.

Sampling Method and Questionnaire

The YRBS used a three-stage cluster sampling design to ensure a diverse and representative sample of adolescents. In the first stage, 1,257 primary sampling units (PSUs) were selected in county level. The second stage involved selecting a physical school that offered grades nine to twelve. In the third stage, one or two classrooms were randomly selected from each grade (Underwood et al., 2020; Kann et al., 2018).

A computer-scannable, self-administered anonymous questionnaire was used in this survey. The completion of survey takes approximately one class period. The survey questions have undergone test-retest analysis and demonstrated good reliability (Underwood et al.).

Data Collection and Response Rate

The YRBS protocol was approved by the CDC's Institutional Review Board, privacy of students was safeguarded, and their participation was voluntary. As the participants were minors, parental permission was also obtained for the completion of the survey. In the 2019 YRBS, 136 schools participated, providing 13,677 completed questionnaires (CDC, 2020b).

Measures and Weighting

The 2019 National YRBS consisted of 99 questions, all categorized as nominal or ordinal variables. It collects information on six categories of health behaviors like injury and violence, tobacco use, drug use, risky sexual behaviors, dietary behaviors, and physical inactivity (CDC, 2020a). This research focused on five specific questions, one measured sexual violence experience, two measured bullying behavior (on-site bullying in school and electronic bullying), one measured misuse of prescription pain medicine (lifetime use), and one measured suicide attempts (CDC, 2020b).

YRBS data were weighted to ensure representation of all students in grades 9-12 attending U.S. schools. A

weight based on sex, race, and grade was applied to survey responses (Brener et al., 2013). The weighted sample was adjusted to match the total sample size while maintaining proportional representation of students across different grades, aligning with the U.S. population (CDC, 2020a; Kann et al., 2018).

Analysis

In this quantitative study, nominal data were translated into coded numeric format. Descriptive statistics were used to analyze demographic variables, while multiple regression analysis was employed to examine the association between sexual victimization, bullying, NUPD use, and suicide attempts. Correlational statistics were used to explore the impact of various health risk behaviors on overall suicide attempts, considering gender and racial effects in the association.

Results

In this study, 8,266 usable questionnaires were analyzed. It was a cross sectional, correlational study. The average age of students was 15.94 years. About 25.74% adolescents selected “yes” for Hispanic/Latino. Rest of the study participants selected no for Hispanic/Latino. Descriptive statistics shows the mean, standard deviation, minimum and maximum values of each of the variables (see Table 1). The suicide attempt percentage has a mean of 0.150 with a standard deviation of 0.533 and ranges from 0 to 4. The mean percentage of sexual violence experience is 0.021, the mean percentage of lifetime use of the prescription drug is 0.288, the mean percentage of being a bully victim physically is 0.193 and the mean percentage of cyberbully victims is 0.148.

Table 1: Descriptive Statistics of Viarriables

Variable	Mean	Standard Deviation	Min	Max
Suicide Attempt	0.151	0.535	0	4
Forced sex	0.210	0.691	0	4
Pd use lifetime	0.289	0.866	0	5
Bullied school	0.194	0.395	0	1
Cyberbully	0.149	0.356	0	1
Age (12=0, 13=1....18=6)	3.991	1.211	0	6
White	0.500	0.500	0	1
Female	0.513	0.500	0	1

The correlation statistics has shown that all risky health behaviors have a particular relation with suicidal behavior (see Table 2). Being a victim of sexual abuse had a positive correlation with a suicide attempt. Similarly, misuse of PD showed progressive relation with attempting suicide among adolescents. However, the

incidence of bullying that happened in school areas had a negative correlation with age. Additionally, female adolescents had a positive coefficient, indicating a positive connection with suicide attempt percentage. However, being White and female (White* Female percent of) had a negative coefficient, indicating a negative relation with suicide attempt percentage.

Table 2: Correlation Analysis

	1	2	3	4	5	6	7	8
Suicide Attempt	1.000							
Forced sex	0.292	1.000						
PD use lifetime	0.216	0.170	1.000					
Bullied school	0.204	0.196	0.112	1.000				
Cyberbully	0.199	0.225	0.093	0.491	1.000			
Age	-0.020	0.008	0.021	-0.074	-0.051	1.000		
White	-0.055	-0.014	-0.061	0.088	0.081	-0.009	1.000	
Female	0.060	0.132	0.031	0.094	0.139	-0.063	-0.009	1.000

A regression analysis was performed to explore the effects of risky health practices of teenagers on the frequency of suicide attempts. Table 3 (regression analysis table) demonstrates the correlation of all independent variables. The dependent variable was the number of suicide attempts.

Table 3: Regression Statistics

Variables	Coefficients	Std. Error	P-value
Intercept	0.090	0.021	<0.001
Forced sex	0.138	0.009	<0.001
PD use lifetime	0.032	0.008	<0.001
Forced sex* PD use lifetime	0.040	0.006	<0.001
Bullied school	0.099	0.017	<0.001
Cyberbully	0.114	0.019	<0.001
Bullied school* PD use lifetime	0.103	0.017	<0.001
Cyberbully*PD use lifetime	0.034	0.019	0.065
Age	-0.006	0.004	0.163
White	-0.023	0.016	0.133
Female	0.045	0.015	0.003
White* Female	-0.076	0.022	0.000

Note: There were 8,266 observations for regression. Value of R^2 is 0.16.

Being a victim of sexual abuse has a significant association with suicide attempts. The coefficient value for forced sex was 0.138 which means that for every 100 students who experienced forced sexual intercourse, they will attempt average about 14 more suicide attempts than the students who did not experience sexual abuse (see Table 3).

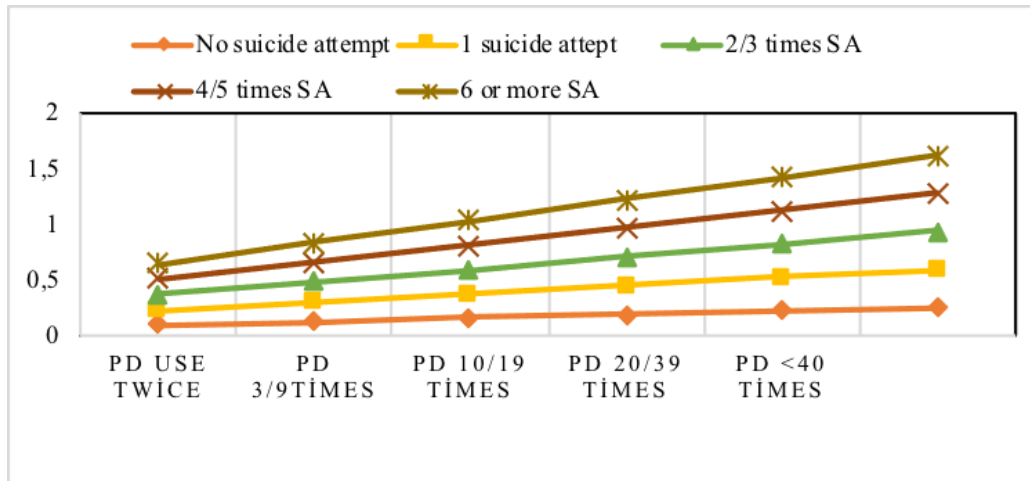


Figure 1: Suicide Attempts by Sexual Violence and Drug Misuse

The preceding graph (see Figure 1) illustrates the combining effect of sexual abuse and drugs misuse on suicide attempts of adolescents. For every two students who experienced forced sexual abuse and also misused prescription drugs, they would try average one more suicide attempt than those who did not misuse prescription drugs (0.498).

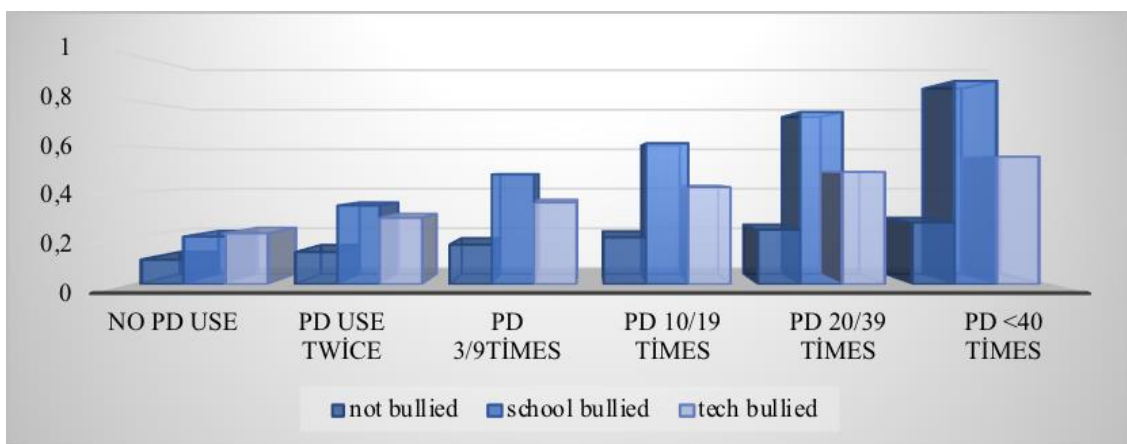


Figure 2: Suicide Attempts by Bullying and Drug Misuse

The study found the interaction of bullying and drugs misuse on suicide attempts (see Figure 2). Bullied at school would also have quite a high increase in average suicide attempts, especially when misusing prescription drugs. But adolescents who were cyberbullied and had a history of using prescription drugs, the interactive impact was not significant.

Discussion

The purpose of this research was to examine whether a sexual violence victim experiences more, or less frequent suicide attempts accompanied by use of self-medication. Additionally, the study explored the interactive impact of prescription drug misuse on bully victims and their suicide attempts. Understanding these associations is crucial as they address significant public health concerns (Baiden et al., 2020; Kann et al., 2018). Regression analysis revealed that multiple risk factors had a more pronounced effect on adolescents. The results indicated a significant association between SVV and suicide attempts, with forced sex (SVV) showing a coefficient value of 0.138 which means that students experiencing sexual abuse had an average of 14 more suicide attempts per 100 students compared to those who did not. Moreover, the study found that the frequency of suicide attempts increased among sexually victimized adolescents who misused prescription drugs. This aligns with previous literature emphasizing the strong connection between SVV and suicide attempts among male and female adolescents (Basile et al., 2006; Basile et al 2020; Liu et al., 2019). Similarly, bullying at school also contributed to a higher average of suicide attempts, especially when combined with prescription drug misuse. The study highlights that combining two factors can escalate the overall number of youth suicide attempts. Despite the assumption that prescription drug use reduces affective disorders among adolescents, it appears that drug abuse may worsen the cycle of unhealthy attitudes of adolescents.

However, when examining the interactive impact of cyberbullying and prescription drug misuse, the results were not significant. Prior studies have yielded mixed results regarding the association. Some suggesting a link to suicide ideation and others to self-harm behaviors rather than suicidal intent (Baiden & Tadeo, 2020; John et al., 2018; Dorol & Mishara, 2021). Additionally, cyberbullying may have an accumulative effect when combined with in-person bullying (Hinduja & Patchin, 2018; John et al., 2018).

The study revealed a higher likelihood of suicide attempts among non-White males compared to White males (with a difference of 0.023). Prior research has consistently shown an increase in self-reported suicidal behaviors among non-White males (Lindsey et al., 2019; Xiao et al., 2021). Results also found a notable increase in suicide attempts among female adolescents, as evidenced by a positive coefficient. However, White females had fewer expected suicide attempts compared to other groups, while non-White females had more expected suicide attempts than non-White males. It is well-documented in the literature that girls are more likely than boys to attempt suicide during adolescence (Cash & Bridge, 2010).

Females have a higher susceptibility to risky behaviors like violence victimization and cyberbullying (Baiden et al., 2020). Negative experiences on social media platforms, such as negative remarks, body shaming, and stalking, can have detrimental effects on their psychological well-being, sleep patterns, eating habits, and mental health, potentially leading to depression, self-medication, and suicidal thoughts. It is essential for intervention programs to prioritize the unique needs of female adolescents and implement targeted interventions. Additionally, understanding the underlying mechanism behind the observed racial difference is important and should be addressed.

Conclusion

To promote a healthy environment for adolescents, it is essential to reduce risky health practices. School boards can implement targeted programs, identify at-risk adolescents, and create peer support systems and social learning programs. Policymakers should focus on adolescents' specific needs and implement cost-effective intervention programs that address multiple risk factors (Baiden, Kuurie et al., 2019). Comprehensive training and health education should be provided by schools, teachers, communities, and social support systems to reduce misconceptions among adolescents. Suicide prevention strategies should address the specific needs of female adolescents and prioritize interventions to reduce the rising trend of suicidal behavior among them.

Recommendation

This study's cross-sectional design limits its ability to establish causal relationships between variables, emphasizing the need for longitudinal research (Baiden et al., 2020). Utilizing a combination of quantitative questionnaires and in-depth interviews can provide more comprehensive understanding of the causal links between suicide and various risk factors. It is crucial for future studies to include data on sexual orientation to account for the unique experiences and health risks faced by LGBT individuals (Baiden et al., 2020). Self-reported answers in the YRBS data may be prone to recall error and under-reporting of sensitive issues, emphasizing the importance of incorporating data from multiple sources (Brener, Billy et al., 2003). Additionally, the study acknowledges that the R² value (0.16) is relatively small, suggesting the presence of other unexplored factors influencing youth suicidality. Future research should consider these factors and expand the understanding of adolescent suicidal behaviors.

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Maximizing Student Engagement in a Hybrid Learning Environment: A Comprehensive Review and Analysis

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Abstract: This article overviews a new teaching method from COVID-19. It uses multimedia resources and more traditional classroom activities together. The course focuses on the benefits of using online parts of hybrid learning in addition to in-person instruction. The benefits of such learning include more opportunities for contact with classmates, participation in the educational process, greater leeway in time management, and interactive education. The purpose of this paper is to provide an overview of the new pedagogical approach that has emerged in the wake of COVID-19, which has prompted a significant number of educational institutions to adopt a particular model due to the adaptability of its schedule and the way students are instructed, in addition to the increased connection and engagement that it fosters between students and teachers. Students who cannot attend class physically can still study thanks to a new hybrid learning method. In addition, students who cannot participate in a traditional classroom setting due to health reasons may have more significant opportunities to participate in hybrid learning.

Keywords: Students' Engagement, Hybrid Learning, Learning Efficiency, Learning Form

Citation: Almusaed, A., Almssad A., & Rico-Cortez, M. (2023). Maximizing Student Engagement in a Hybrid Learning Environment: A Comprehensive Review and Analysis. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 428-444), Denver, CO, USA. ISTES Organization.

Introduction

There is no general acceptance of hybrid learning. The word is often used, yet it is essential to instructors and students in a changing area (Caner, 2012). Following this objective has created a hybrid learning system, which educates students through in-person and online training. Further research is needed to establish the usefulness of hybrid education and how educators might use this instructional strategy to provide significant learning

opportunities for students (Maurice E. Abi Raad1 & Hamad. Odhabi, 2021). According to Ibrahim Y. K. and Cemre K.Y. (2022), hybrid learning based on merging conventional face-to-face and online teaching-learning paradigms has grown popular with the advancement of technology. Its popularity necessitates a reconsideration of the conclusions of recent empirical investigations on the efficacy of hybrid learning.

It means synchronous learning that teaches both in-person and online learners simultaneously. Hybrid learning is here to stay because it facilitates education delivery in current contexts while satisfying learning objectives. In other words, hybrid learning mixes formal and informal learning with experiential learning. J. Singh et al. (2022). affirm that individuals impacted in higher education must have access to the necessary resources to continue instruction from home. In addition, students needed the resources required for online studies, such as a computer with video and audio capability and a stable high-speed Internet connection (Singh J. et al., 2022). To achieve learning outcomes, such training should provide learning resources and methods (e.g., asynchronous e-learning modules and videos) (Dhawan, 2020).

- What distinguishes blended learning from hybrid learning?

The ratio of one type of activity to another matter less in distinguishing between blended and hybrid formats than the types of participant synchronization. People seeking to study remotely during the COVID-19 lockdown will discover that blended learning is a good alternative, resulting in a considerable boost in learning engagement, according to Duong H., Tong B. Phuong U., Lu (2022). The best results for instructors and students come from utilizing the benefits of each teaching technique and combining the benefits of online and face-to-face learning.

Differentiating between hybrid and blended learning is crucial for picking the method that will benefit the teacher and student the most. These two models have in common the use of IT to supplement and improve classroom instruction. The opposite is true of blended learning, where students and teachers cannot participate in classes remotely or have their lectures recorded and made available online. The hybrid learning model, on the other hand, will enable students to interact with their instructors while receiving instruction online (asynchronous learning). Online and on-campus students share the same learning space in a hybrid setting. The term "hybrid learning" refers to an approach to education in which traditional classroom instruction is combined with distance learning strategies like using digital tools and online materials to maximize the strengths of each. W. Ian O'Byrne and Kristine E. Pytash claim that there is a common need for clarification regarding the differences between hybrid and blended learning. Blended learning, also known as hybrid learning, is a method of teaching in which online activities and other forms of computer-based instruction supplement traditional classroom lectures. Many studies use blended, hybrid, and mixed-mode learning interchangeably. Both approaches combine digital tools with conventional education methods to make learning more adaptable, inclusive, and scalable.

Although "blended learning" is relatively new to education, the ideas and concepts it describes have been around

for much longer. Studies have shown that students benefit significantly from digital teaching, including hybrid learning, because it is student-centered, flexible, and can improve student interaction by providing asynchronous and synchronous tools like zoom meetings, forums, chats, videoconferences, etc. simulations, aids, and interactive whiteboards. That makes it an element of blended learning and a concrete instance of incorporating EdTech into pedagogy. But many different definitions come from even very reliable sources. Future approaches to education will need to be more adaptable, so finding a workable definition is paramount. Therefore, the need to ensure student participation and engagement led to the development of distance learning, which allows students to gain education regardless of their location, thus increasing the adaptability of the learning process. Improvements in Cloud-based potential, improved synergy, and increased creativity on the part of teachers and students are just a few examples of how hybrid learning methodologies are maturing. Due to the restrictions that COVID-19 imposed on the world, online education has become a progressive and safe way to get a degree (Singh et al., 2021). Sarah and Donna claim that the online hybrid courses combine. The effectiveness of mixed classes, measured by student attitudes and performance, varies across the literature, as shown in Figure 1 (Hall & Villareal, 2015).

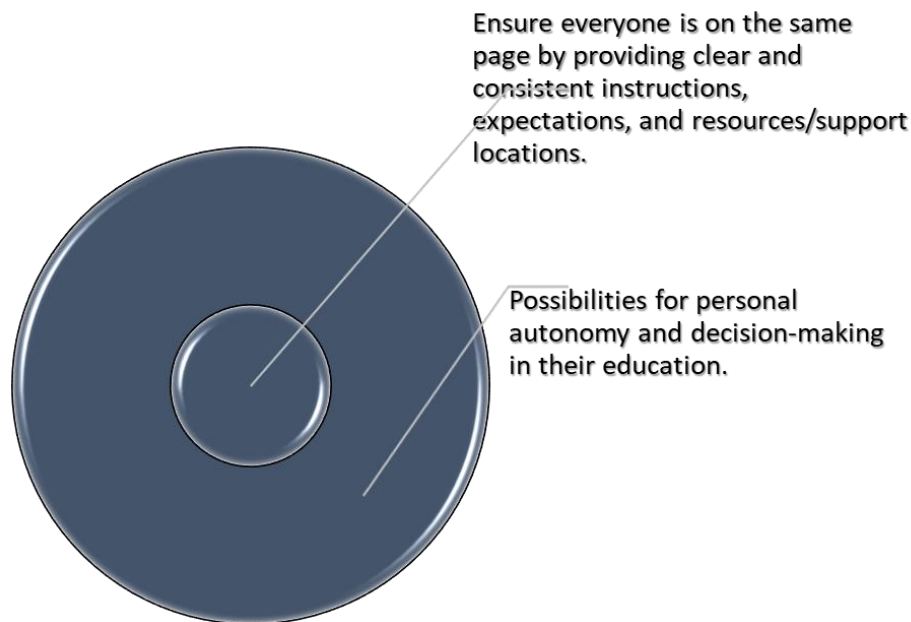


Figure 1. Students' engagement is required for the hybrid education system.

Teachers in face-to-face learning environments must understand how to use a variety of online learning tools as well as face-to-face classroom activities to encourage and monitor students' development. According to Chantal R. et al. (2017), skill development is critical for teachers to promote a flexible, responsive approach and maintain technological capabilities; for students, an ability to navigate technology, interact with the learning environment in meaningful ways, and self-regulate learning is essential, as the lack of physical infrastructure and opportunities for face-to-face interactions in online environments places a greater emphasis on alternate fora. The current study investigates well-known best practices for online instructors, students, and student

assistants and analyzes how they could apply to intensive online situations. Gamage, K. (2022) claims that faculty members are increasingly challenged by two phenomena related to student involvement and interaction in online/hybrid learning environments. First, transitioning to online education calls for adjustments to pedagogy and the construction of modules. The most challenging part will be breaking the habits that both teachers and students have grown accustomed to. The words mean "teacher-student." Classroom dynamics and student development are both influenced by how students interact with one another. According to the developmental viewpoint, as seen in figure 1, a healthy teacher-student connection benefits students' mental health and cognition, socialization, and emotional development.

Beyond the pandemic, Enoch Wong, Shuaiguo Wang, Xiaoxiao Wang, and Xinjie Yu (2022) also consider hybrid education's openness, integration, and resilience. According to Gleason, B. and Greenhow, C., there are difficulties for both students and teachers when synchronous hybrid learning is implemented. Online students may need help to develop a sense of community, which is crucial to their academic performance (Gleason & Greenhow, 2017). Hybrid learning models allow students to attend class in person one day and watch lectures online the next. Students also have the option of attending either in person or remotely. The quality of education will remain the same. One analogy that works well for describing hybrid learning is the hybrid automobile. It doesn't matter if the driver today decides to run on gasoline, electricity, or a hybrid; the end effect will always be forward progress. We introduce the concept of hybrid learning and discuss critical factors for improving engineering education (see figure 2). There are two ways to interpret the classroom setting in engineering courses:

- Learning form (configuration); action and interaction for online and face-to-face learning
- Learning tools (anatomy); Components for learning process



Figure 2. Learning Categories in a Modern Academic Environment

Hybrid learning can only succeed in a healthy educational environment where students feel secure sharing information, everyone has an equal chance to grow, and several communication channels are valued and utilized. If schools want to design an effective hybrid classroom, they need to think forward, avoid blindly copying old teaching methods, and anticipate the future of education (Rotellar & Cain, 2016). As reported by Nashir (M.) and Laili (R. (2021). The academic community must adjust to the new norms by following the rules

established by the state. Educators may tailor their students' lessons with hybrid education to best suit their needs. Yet, several factors must be considered when designing an instructional solution if hybrid training is to be effective. When setting up their students' learning, instructors have more fantastic choices and more freedom with hybrid learning. Nonetheless, the efficiency of instruction delivered in a hybrid format will invariably be affected by several factors that need to be considered in formulating an educational solution. At this point, hybrid learning, which combines face-to-face classroom instruction with independent online study, has demonstrated its value to the education process. The degree to which we participate, pay attention, and show an interest in a subject is directly correlated to our level of engagement with that subject. Because of this, having meetings in the classroom is essential. At the same time as it facilitates successful learning, it transforms the lecture from an awkward "sit down" into an engaging experience for the students. As a result, it is the responsibility of instructors to work toward increasing participation in their classrooms. Engaging students is one of the most critical conditions to be met before teaching can be successful. As stated by Lokanath Mishra, Tushar Gupta, and Abha Shree (2020), the most challenging aspect of any learning process is not coming up with and selecting intriguing content but instead captivating the student to the point where he accesses the online learning area and begins studying. This is the most challenging aspect of any learning process. Students need to understand the lecture content and the curriculum to evaluate whether alternatives for new learning techniques and Technological assistance make sense and put those options into practice. In addition, they need to understand how their objective involvement in the activities and the overall design of the course may be used to fill in any gaps left by the lectures with individualized answers. On the other side, there is a fundamental question that has to be answered: How can one create friends both virtually and in real life? Because hybrid education is the foundation of this topic, teachers must have a solid understanding of its complexity and methodology to design effective lesson plans.

Maximizing Student Engagement in Hybrid Learning: Effective Strategies and Techniques

If students are actively involved in their learning, they are less likely to feel alone when taking online classes and will be more motivated to complete the course material. Florence Martin, and Doris U. Bolliger (2018), think fostering active participation from students in a welcoming digital space is critical. Yet, a dynamic, all-encompassing student engagement platform is required to engage students successfully. Teachers can still sit through boring lectures in the vain hope that their students will pay attention. On the other hand, there are several methods in which students can participate in a hybrid learning environment. Students are more likely to be invested when they try to learn and participate in class. Yet it goes more than that and may encompass things like a motivation to learn and mental health. Students are more likely to be invested when they try to learn and participate in class. Yet it goes more than that and may encompass things like a motivation to learn and mental health. Annelies Raes (2021) agrees that further study is needed to determine what aspects affect a student's motivation to learn and participate in these novel settings—educators' thoughts to back up this possible new norm. Individualized, face-to-face instruction cannot be replicated online. For online and blended courses to be

practical, all students must participate fully in the various learning processes. Introducing the concept of Active learning, which stresses involving students in the learning process via engaging activities, is a popular way to increase engagement (see Figure 3).

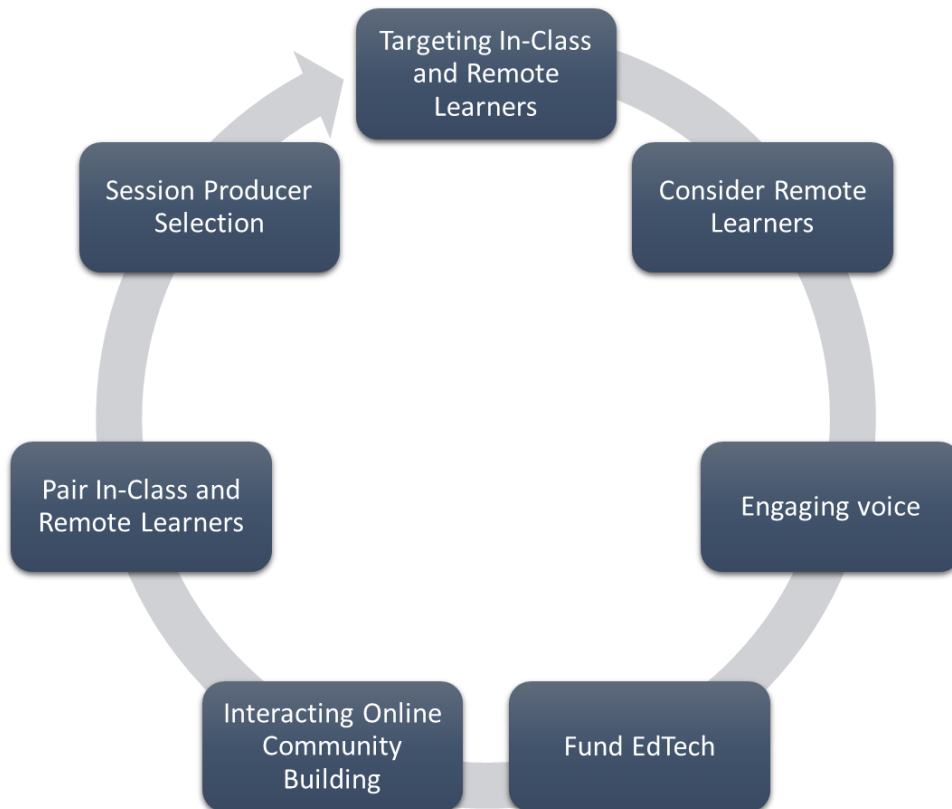


Figure 3. Effective Hybrid Class

The idea is to give students a fair chance to contribute meaningfully to classroom discussions. The modern technical infrastructure is essential for high-quality hybrid instruction. Technological speaking, providing students participating in a virtual environment with the whole impression of presence may take time and effort. As stated by Coman, and Cet al (2020), colleges must change with the times to suit the demands of today's students. The importance placed by universities on IT and E-learning platforms has led to a rise in spending on related hardware and software. According to the study's authors, high-quality sound transmission is significant here since students must interact with professors and classmates in ways they feel most at ease.

Maximizing Hybrid Learning Efficiency: Strategies for Lecture-Level Instruction

A leader with a broad viewpoint and the capacity to encourage students are essential qualities in a teacher using a hybrid lecture architecture learning model. There is little question that hybrid learning will become standard practice in classrooms. According to Coman (2020), technological problems are the most pressing, followed by instructors' need for more technical abilities and an ineffective adaptation of their pedagogical approach to the

online setting. There will be a flurry of activity in creating and disseminating various educational and informational technology. Success in the classroom depends on several factors, including customization, motivation, and others; they will all improve. A comprehensive knowledge of digital education should include organizing teacher-student interaction to build a digital educational environment. Specific rules must be followed while the lecture functioning model is created:

Engage in Productive and Collaborative Small Group Discussions: Tips and Strategies

One method is to have students work in smaller groups during class time to debate and elaborate on the content covered in larger-scale lectures or handouts. Students are expected to participate actively in this method by collaborating in small groups to research, pose questions, draw conclusions, and share their findings. As a result of its casual nature and short duration, small-group discussion can be employed repeatedly throughout a single class period. Jitendra. Singh (2021) asserts that it is necessary to investigate various teaching strategies, such as online, hybrid, and blended learning techniques. The widespread adoption of reliable videoconferencing has dramatically increased the effectiveness of hybrid learning. In addition, many platforms support chat rooms where small group discussions are as good as classroom discussions. Working in small groups bridges the physical divide between in-person and online groups in hybrid education. When learners on-site freely work with the students at home in this way to accomplish tasks, develop answers, or prepare presentations, a sensation of being in the middle of things rapidly arises. This requires tools that all those engaged may utilize equally. According to Brame CJ and Biel R. (2015), the appropriate size of a group for small conversations ranges from two to six persons, depending on the activity that you have planned. It may be helpful to pre-assign group members to guarantee a diverse range of vocations, abilities, and experiences represented in the group. This may result in more fruitful and varied conversations (see Figure 4).

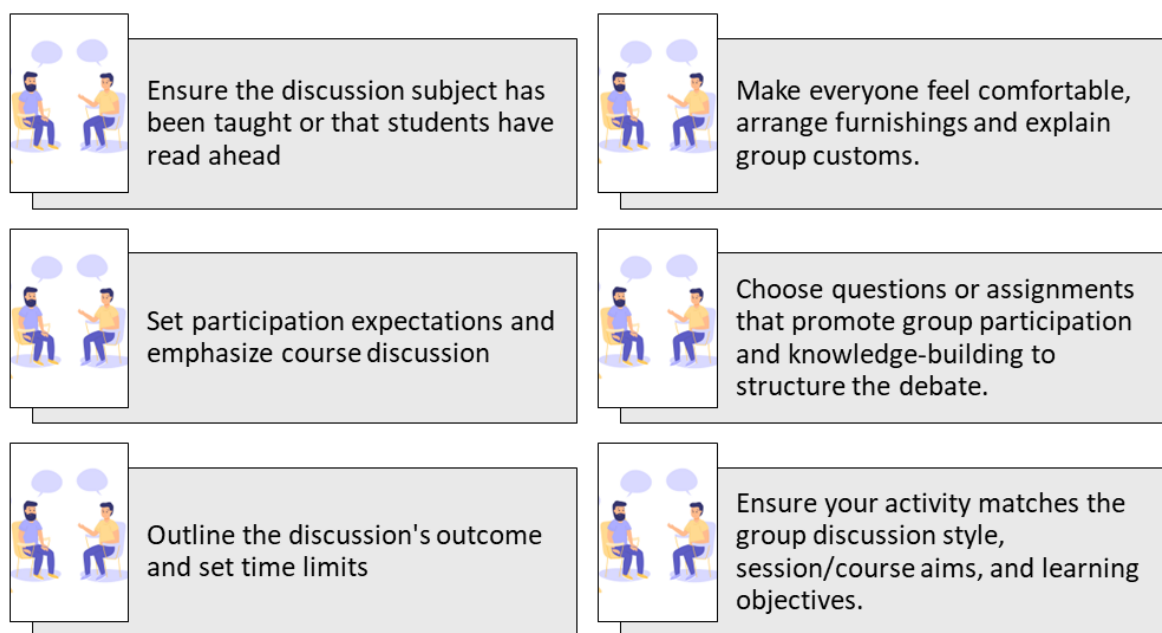


Figure 4. The Benefits of small group discussions in academic settings

A SWOT analysis of the system, in which strengths, weaknesses, opportunities, and threats are explored, might be beneficial when contemplating employing small group discussion as a teaching approach in the classroom. This analysis looks at the system. The SWOT analysis will uncover areas of power that may be called upon for chance while utilizing the strategy. It will also analyze how weaknesses can be eliminated to produce new possibilities. This study can assist a teacher in determining whether or not a particular educational system is acceptable, as well as the potential difficulties that may arise during its implementation.

Enhancing Learning Through Video: Innovative Approaches to Education

Using short films into ins lectures also helps broaden students' perspectives and make the material more accessible. Moskovich, Y., & Sharf, S. argue that using films to achieve the aims of cognitive and emotional instruction is both novel and entertaining (2012). Students may practice their analytical, synthesis, and critical thinking abilities by watching these films and applying what they see to established sociological frameworks. He concludes that incorporating film into non-film classes benefits students in several ways. First, instructors must see any movie they movie show in style to provide the necessary materials for their students. Second, it has been shown that educational videos musing films can be helpful as study aids and clearly explain ideas. Third, Morz thinks showing classroom movies might help students better conceptualize complex concepts. Finally, engineering classrooms can benefit from using films in many ways, including cultivating skills in reasoning, critical thinking, memory, self-regulation, and curricular reflection. According to Morze, L. (2008), the ILO's course is designed to help students learn more, think more critically, and become more invested in their coursework.

Maximizing Course-Level Efficiency with Hybrid Learning: A Study on the Effectiveness of hybrid Learning

The instruction process is complex since teachers are expected to simultaneously be proficient in various activities. Any course design ought to be founded on a distinct collection of learning goals that call for hands-on instruction inside the university; it will make perfect sense to derive learning goals from teaching purposes. The issues posed by hybrid learning can now be addressed by educational institutions such as universities. The challenges of engaging students in learning in traditional classroom settings and those studying independently at a distance can be overcome by employing the strategies outlined in the following paragraphs. The following methods are ones that teachers can utilize to build an objective method for student participation.

Effective Engagement through Observation and Experimentation

The most fundamental and arbitrary sorts of evaluation are things like observing teachers in the classroom and having students take tests. The method of measuring is based on the instructor's arbitrary and observational judgment of the student's level of involvement in the process thus far. An outsider could also make this comment to lend some objectivity to the discussion. Researchers Linda Darling and colleagues (2012)

investigated the relationship between shifts in teacher observations and ratings and changes in student characteristics. They discovered a large amount of volatility in teachers' value-added scores from one class to the next and from one year to the following. In the classrooms of the future, the use of technology will need to be increasingly prevalent because it can boost student participation in several different ways. One of the essential advantages of using this instructional method is that the course material may be presented in a manner that is substantially more engaging and easily understood thanks to digital content such as animated presentations or videos. Learning through digital means is pleasant and helps enhance focus by introducing variety and excitement into the learning experience. It is possible to make information readily available to students so that they can study it or investigate it more at home. Concurrently, time spent in the classroom is used more effectively and is no longer wasted on reproducing lengthy chalkboard graphics. The use of digital education makes it possible to cater to the specific requirements of individual students.

Increasing Student Engagement through Surveys

A student engagement survey is like a course or class assessment. It allows students to evaluate the quality of education and their level of interest in the subject and can be utilized in writing or digitally on a multiple-choice basis. With polls, one may avoid guessing and obtain accurate student opinions. But surveys have several significant limitations. The responses are unrelated to the quality of education and are based on the student's sentiments about the teacher. Such biases and subjective judgments may also influence the process. For further information, Cristine D. et al. (2022) state that neuroscience advances have helped us better grasp the harmful effects of stress and trauma on learning. Trauma is any situation in which a person's internal resources are insufficient to cope with external pressures. It is known to have an emotional impact.

Enhancing Engagement Through the Use of Statistics

Students may benefit from critical thinking skills instruction in areas such as data organization, hypotheses, and the importance of data samples. Students' skill sets developed and used in statistics classes can be transferable to and used in various other courses and fields. Statistics can also be used to make engagement assessments. In addition to the measuring tools specified in the program, this data provides a new, unbiased perspective: exam results, attendance records, active involvement, and students' computer time. Individual systems that form an engineering degree program, according to Debra L. Hydorn (2018), may not give students with experiences in the broader spectrum of activities that characterize statistics practice. Teachers should consider designing and supervising student research projects to address this issue.

Optimizing Hybrid Education with Adequate Supplies and Effective Techniques

The engagement approaches must include specific activities that may be used to improve the quality of

education and increase student interest and engagement. Jérôme Hutain and Nicolas Michinov (2022), for example, conclude that seeing the teacher's presentation on their device and quizzing and asking enhanced students' emotional involvement between the beginning and finish of the lectures. Additionally, when just quizzing activities were offered, more students participated behaviorally to take other quizzes one week following the previous study to prepare for tests. Mark Edward Deschaine Deschaine David (2017) states that the meeting must take seven levels, as seen in Figure 5.

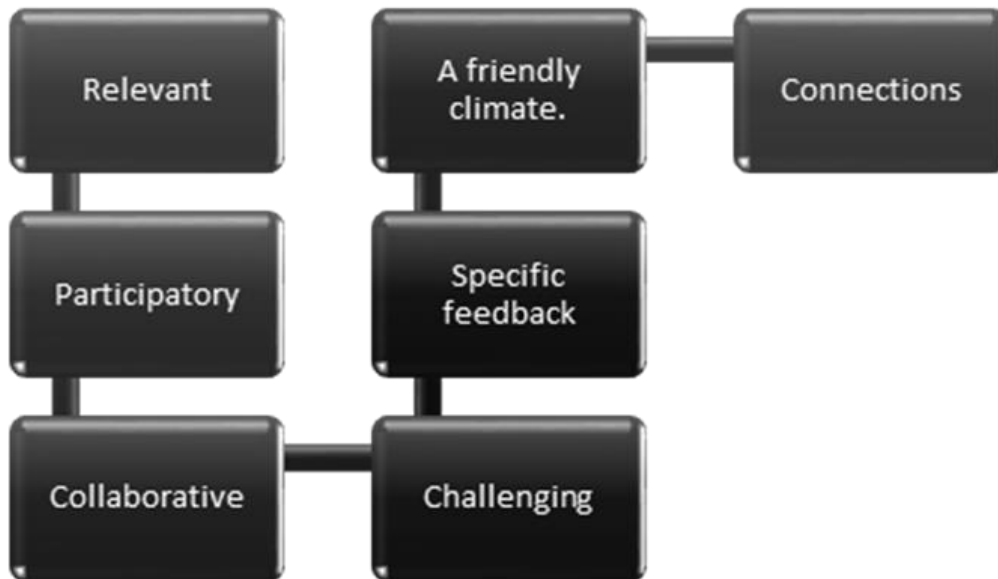


Figure 5. Students' engagement levels

Teachers can use many potential ways to promote student engagement in the classroom by boosting students' motivation, enjoyment, and interest in the material being taught. It is necessary to derive some strategy from the following options to create and evaluate student engagement:

The Activation of a Five to Ten-Minute Warm-Up Training Session before the Beginning of the Presentation

Through participation in active exercises for five to ten minutes, students need to transform their mindset from focusing solely on the perception of knowledge to concentrating on the exchange of information. A warm-up activity is a game that can be played with students and can be used by teachers and trainers. Motivate the students, wake them up (people are typically tired first thing in the morning and after lunch), and prepare them to learn by engaging their minds and bodies in activities that will make them think critically and perform physically. The warm-up period should last for around five minutes. The following are some of the many advantages of doing warm-ups in the classroom: Signal the shift when students have finished learning about one topic before beginning to study a new issue. Help new students or trainees get to know one another. Teaching strategies such as exercises to warm students up before class is crucial for competent teachers and trainers.

Moreno Rubio, C (2009), affirms that being an effective teacher involves having deep content knowledge and organizational, management, and communication skills, organizing instructions, and providing relevant assessments and fair evaluations.

Creating Fair Opportunities for All Players: Equalizing the Playing Field

It is a challenging undertaking to instruct two separate groups simultaneously. On the other hand, the group content that the teachers of the class upload to a secure area is accessible to all of the students. Tae Eun Shim and Song Yi Lee (2020) revealed that student homes and personal computers were the most preferred places and modes of involvement among college students in South Korea. The survey was carried out among South Korean college students. According to the study's findings, the learning settings of college students are critical, and the quality of the students' interactions may vary depending on the instructors—use of various technological instruments. Students who attend school at home can access them regardless of how they attend class. In a similar vein, the content of the lecture will remain the same even if students from home attend remotely. After conducting a survey, Brooke Hollister and her colleagues (2022) found that most students reported feeling more comfortable asking and responding to questions in online classes. This finding suggests that there are components of online learning that students are willing to engage with. The interactions are primarily based on Moore's three kinds: instructors, peers, and curriculum. Moreover, the types of interactions depend on factors present in the student's local environment or microsystem.

Pause for Thought: Taking a Break for Reflection

Learning almost always involves overcoming challenges, which can be frustrating but are essential to the process. This is especially true when it comes to gaining an understanding of complex conceptual ideas. However, difficulties in the learning process are more difficult to identify and address in learning contexts when teachers cannot give students individualized feedback and support due to increasing class sizes and the use of digital technology [Jason M. Lodge et al. (2018)]. This makes it more challenging to identify and address problems in the learning process. Helping children figure out who they are can be an effective strategy for encouraging them to talk freely in foreign environments. The reflection break is a straightforward and cost-free method that can be utilized to encourage reticent students to concentrate more thoroughly during the duration of the lecture.

Ensuring Student Understanding: The Importance of Regular Checking

It can be challenging to comprehend what is happening in students' thoughts, mainly when more than fifty percent are absent from class. Teachers will gain insight into their inner condition through surveys and rapid learning exams, which will also highlight the importance of feedback. According to John H. and Helen T.'s (2007) research, receiving feedback is one of the most important aspects influencing one's ability to learn and succeed. Nonetheless, this influence's outcome can be favorable or unfavorable. Consequently, the usefulness of

the feedback provided and how it is given may change depending on the circumstances. Consideration of a continuum of instruction and feedback is required to understand the goals, outcomes, and different types of feedback. At one extreme of the spectrum, providing education and feedback are two distinct but related activities, yet there is a significant gap between the two. Input in the form of exams and polls has been shown to have one of the most powerful effects on learning and achievement. On the other hand, its influence may have either a beneficial or detrimental effect (Kim & Lee, 2019). Consequently, the efficiency of the periodic check, the feedback, and how it is presented may differ. Opinion polls will rapidly reveal people's genuine sentiments while making it obvious how important feedback is.

Amplifying Teacher Effectiveness through Student Voice and Participation

According to research conducted by Dianne L. Ferguson, Amy Hanreddy, and Shawna Draxton (2011), providing students with a "voice" for active participation in decisions about their learning environment can also boost engagement as a desire to learn significantly. Of course, if you want the class to participate completely, you must ensure that everyone can hear everyone else and that the students can hear themselves. But, to participate in debates and other interactive educational activities, they must listen to what other students say (mainly if they work from home). If more focus is placed on student involvement in meaningful educational choices, reducing the power inequities frequently occurring in traditional classrooms may be possible.

Empowering Students as Conversation Monitors in Lecture

If students join a class from home, one straightforward approach to maintain their interest is to keep them engaged through the chat capabilities available on your zoom platform. According to Jane Sutterlin (2018), Zoom's classroom has developed into a powerful, indispensable, and trustworthy video conferencing technology that can be used for working, teaching, and learning. We can keep our online students if we cultivate a healthy social learning environment characterized by supportive connections between instructors and students. The primary challenge is determining how to check the chat while simultaneously attempting to transmit the content. Could you give one of the attendees the responsibility of monitoring the conversation? He can discuss any topic, respond to prior questions, and identify problems with communication.

Highlighting the Importance of Always Available Support

It can be challenging to deliver hybrid learning efficiently. The educational challenges that instructors must overcome are enormous, and this is in addition to the fact that they must constantly contend with the possibility that technology will let them down. Therefore, it is essential to have a technical support system in place to overcome obstacles and enable students to participate actively in their education. So, choose technological options that are dependable and easy to operate. And make sure that your company's information technology personnel are constantly available to help.

Discussion

Higher education institutions increasingly adopt hybrid learning environments where students participate in online and face-to-face educational activities. Students are given the opportunity to comprehend and investigate topics relevant to the real world within the context of an authentic learning experience enabled inside an online learning environment within a hybrid learning environment. "Hybrid learning," sometimes known as "blended learning," blends online learning with traditional classroom instruction. Hybrid learning aims to establish a learning environment that is both the most efficient and effective possible by integrating several modes of instruction delivery. One of the key challenges this type of training offers is maximizing student participation, which is critical for good learning results. According to Singh, J., Steele, K., and Singh, L. (2021), characteristics of this approach include student-centered teaching in which every student is required to actively participate in the content-increased opportunities for interaction between student-faculty, student-student, content-student, and student-additional learning material.

This article thoroughly examines and analyzes the many methods and approaches that may be utilized to accomplish the objective above. Several colleges have adapted to online and blended learning. Certain activities, notably laboratory-based instruction, remain on campus, while some information is given online. Substantial changes to conventional face-to-face student engagement activities are required for successful online and hybrid teaching and learning. This article begins with analyzing the theoretical underpinnings of student engagement, emphasizing its multidimensional component as well as the numerous factors that might influence it. It then investigated the various hybrid learning models and their implications for student participation. In conclusion, this study investigated multiple successful approaches to increasing students' levels of involvement in mixed classroom settings. The policies discussed in this article cover a wide range of subjects, including course design, teaching methods, the incorporation of technology, student aid, and evaluation. Effective methodologies include active learning approaches, flipped classroom models, synchronous and asynchronous communication channels, peer-to-peer learning, and personalized learning paths. In addition, the study reveals several difficulties and constraints connected to the execution of these techniques. Specific systems, for instance, may require increased resources and additional faculty and staff training. In contrast, other methods may be more suitable for some regions of study or student groups. In addition, the research underlined how important it is to continually review and evaluate the efficacy of the approaches to ensure they are successful. In conclusion, the paper summarizes several strategies that can maximize students' active participation when applied appropriately in hybrid learning environments. This study can be a valuable resource for teachers and educational institutions striving to maximize their students' learning outcomes in hybrid learning environments. This is accomplished by emphasizing the positives and negatives associated with the various strategies.

Conclusion

Communication is an essential component of the effective operation of the learning unit; however, it takes on an

even greater level of significance when the team uses communication technologies such as cameras and microphones. A student, for instance, may pose a question during the teaching units; however, he may speak too softly for students located further away to hear him. By explicitly restating the question before providing the solution, the instructor can assist online students in maintaining their focus on the presentation. Students, particularly those who engage remotely, are aided in their ability to remain attentive and focused through straightforward storytelling. Questions promote introspection and involvement, and interactive survey technologies that collect students' responses during class can energize each student in the room. Not only does this assist students in paying attention, but it also enables the instructor to obtain clear feedback on when to improve the course if certain content is unclear and needs clarification. This is a win-win situation. "hybrid learning" refers to instructing students simultaneously in person, directly within the instructional unit, and with various internet technologies. The nature of mixed groups shifts dramatically based on the curriculum being covered and the requirements of the students. The flexibility of delivery is one of the significant benefits of utilizing a hybrid curriculum. Students can get a first-hand familiarity with the topic's fundamental ideas, which need extra exam plantation and hands-on practice in classrooms or laboratories specifically designed for that purpose. Also, you will need to repeat and reinforce previously learned material and complete all assigned activities and examinations. All of this is attainable, which makes it possible to store all educational materials in a single location and automate the process of providing training as much as possible; this includes everything from completing homework assignments for lessons to obtaining a certificate of completion for training. The instructor can organize the interaction that takes place online as well as the communication that takes place face-to-face in such a way that they complement one another.

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Supervising Multidisciplinary Research: Navigating Challenges and Reaping Rewards

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Abstract: International research is already booming, and global problems like climate change have sparked interdisciplinary initiatives involving academics from many nations, disciplines, and tongues. Integrating the research team, the supervisors, and the doctoral students present several challenges, such as multicultural issues; integrating a good team depends on the supervision style and type of postgraduate students and how to supervise students to conduct quality research. This article examines supervisory approaches, and the challenges and rewards supervisors face while supervising diverse projects. The lectures from the Graduate Studies in Supervision course were examined, along with a literature study. Two senior supervisors from the International Business School (JIBS) and the School of Engineering at Jönköping University participated in small-scale research and observed two supervisory sessions, where there were discussions and supervisor reflections. Observations, talks, and the findings of a survey based on Lee's research were compared to determine the supervisory style. The failure to define the scope and writing of the publication when a journal article is rejected after 1-2 years, which affects the trust of the student and the supervisor and the time plan in a multidisciplinary project, are just a few of the challenges that emerged during postgraduate supervision. Discovering our teaching and supervision style may help guide our students in a multidisciplinary environment.

Keywords: Supervision, challenges, rewards, multidisciplinary, engineering sciences.

Citation: Rico Cortez, M., Almusaed, A., & Almssad A. (2023). Supervising Multidisciplinary Research: Navigating Challenges and Reaping Rewards. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 445-463), Denver, CO, USA. ISTES Organization.

Introduction

Complex emergencies like the impact of climate change have pushed the world to search for a clean energy

transformation, investigating and creating new technologies that could contribute with it, however, the relation between the Research in Academy, Industrial Sector and Government are essential to advance with the development of these new technologies. (Dawood, Yusuf, & Muammer, 2021), (Kaneberg, Rico, Hertz, & al., 2022).

In Academy, these complex emergencies have changed the way of research adapting to the changing nature of intellectual and social challenges: the increasing role of interdisciplinary, the expansion of research in society, the emergence of “knowledge” society, from individual research projects to participation/collaboration in research teams. The increasing role of external/international funding following or create new rules or guidelines including not only engineering topics, but multicultural ethics, and social rules as well (Roger Säljö, 2022). Thus, adequate supervision could provide tools like an interdisciplinary response to these complex problems, how to investigate, conceptualize and create new solutions to deal with ethical aspects and to encourage academic leadership, networking, and internationalization developments in multidisciplinary settings, (Lee, 2012).

However, how to know if we, as supervisors, could provide an adequate supervision? According to (Lee, 2018), the development of supervisors through courses, workshops, mentoring, and awards is a relatively new area of academic staff development. Questions about evaluating supervisor development activities as well as whether and how supervisors should be accredited have only just begun to be ask. Supervisors of the modern doctorate are still mostly drawn from academia, co-supervisors drawn from industry, professional and creative practice need further study, (Lee, 2018).

In order to understand how to be an adequate supervisor, the purpose of this article is identifying the supervision and the doctoral students’ styles and explore the challenges and rewards that supervisors have during their process of supervision in multidisciplinary projects. To conduct this article, a literature is reviewed, then a small study through observations and a survey is showed and finally the analysis of results observations, discussions and conclusions are presented.

Literature

The literature review is based on general literature and the Supervision Postgraduate Studies (SPS), code FLHDK32, course’s lectures.

Multidisciplinary

Multidisciplinary collaboration in higher education represents one of the major trends, impacting academic’s supervision, (Lee, 2012), (Kessel, Rosenfield, & Anderson, 2003). Multidisciplinary project in higher education refers a collaboration between Industry and Educational institutions to address complex problems or challenges that require expertise from different disciplines where, practitioners, supervisors and students work together,

(Hero & Lindfors, 2019).

The process of carrying out a multidisciplinary project may vary, depending on the country, systems, government standards, foundations, etc... nowadays international research is more common and the members of the project must adapt according to the laws of the institutions and companies. However, the multidisciplinary approach remains a controversial issue, according to Gibney, with critics of this trend claiming that collaboration will kill off multidisciplinary approaches, while others point to its potential to substantially increase academic efficiency, (Gibney, Copeland, & Murie, 2009).

The Role of Supervisor

A central dimension in higher education is supervision which has become more important for universities to consider not least because of external demands to avoid inefficient research impacts and the requested academic accountability, (Kumar & Stracke, 2007). A supervisor is the one who supervises the investigation and manages the life projects; According to (Lee, 2012) a good supervisor is one who knows how to productively manage the inevitable tensions that arise between people, the research itself and the institutional objectives.

However, there are more skills that a supervisor must have, sometimes it must be a psychologist, a teacher, a friend, or a guide without crossing a fine line between a friend and a person with "authority". Acting professionally and personally, creating a research environment will have an impact on how students will conduct their research; allowing for creativity and originality is a crucial test of research supervision.

Aspects that lead independent researchers, such as building a genuine supervisor-student relationship, and structured supervision with clear and reflective objectives, they have shown tolerance for ambiguity, resilience, and practical intelligence that allow them to solve problems more independently (Lee, 2012) (Blomberg, 2022) (Larsson, 2022).

The objective of a research supervisor is to contribute to the development of the researcher and help him/her to be a doctor, who will need to demonstrate the ability to contribute to social development and support the learning of others both through research and education and in some other way, qualified professional capacity (Sandblom, 2022).

Supervision Style

Since the beginning of the 1900s, when educational programs started in social work in the United States, supervision began to be a formally developed pedagogic instrument. The initial strong influences on the tradition of supervision of European professionals in social work came from the European psychoanalytical tradition of the 1920s. Thus, supervisory methods were developed with strong psychoanalytic or psychodynamic theoretical bases. Regardless of theoretical basis or orientation, the aim of supervision is to increase the

knowledge and competence of the practitioner, whether you deal with human services professionals, students at the undergraduate level or PhD candidates (Emilsson & Johnsson, 2007).

The various forms of supervision are compartmentalized depending on what one focuses on. In problem-oriented supervision, one focuses on tasks that are undertaken together with the PhD student, comprising identified problems to be solved. In this situation the central objective is to teach the student how best to solve the problem and have the capacity to contribute to constructive solutions among supervised (Emilsson & Johnsson, 2007). During this process the communication, the environment and the relationship is a key to achieve the research goals.

However, through the supervision process many situations could happen, according to (Emilsson & Johnsson, 2007) many of the problems are attributed to the relationship between the supervisor and the PhD student. Problems like abuse of power by mentors, Apathetic supervision, Passive supervision, or an Ambiguous supervision, when the supervisor's comments the supervising input process are not clear and similar experiences have been reported in international studies (Amjad, Asaad, & Rico Cortez, 2020).

For the other hand, multidisciplinary supervision leads to scientific differences becoming a resource that can benefit the research communities. It not only creates learning and new opportunities for action in relation to everyday complex challenges. At the same time, it is an effective PhD student's development, which is based on the work with the core (Lee, 2008), (Amjad, Asaad, & Rico Cortez, 2020).

Positive and negatives aspects of supervision styles have been found, in order to guide and improve the supervision style some studies indicate that many institutions in Higher Education have developed training in supervision where a PhD student's supervisors must attend a special course. According to (Emilsson & Johnsson, 2007) courses in research supervision for supervisors have been given at more and more universities in Sweden and the government has proposed that 'institutions of higher education with postgraduate programs must offer training in supervision' (Prop. 2000/2001:3), (2004:27, 2004).

According to (Amjad, Asaad, & Rico Cortez, 2020) Supervisors should ensure that they undertake training as part of their continuing professional development to support their work as a supervisor. In addition, supervisors should take the initiative in updating their knowledge and skills by participating in a range of appropriate activities and sharing good practice.

However, the question here is how to find our supervision style? According to (Lee, 2018), many research supervisors feel inadequately prepared for preparing their research students. She argues that a supervisor has responsibility for ensuring that students think about how their research will be but does not mean the supervisors have to become the careers supervisor. Nonetheless, there are generic skills of supervision that can help to be an adequate supervisor.

To find a supervisor style, Lee has created a holistic and integrative framework based on five conceptual approaches: The functional, the enculturation, the critical thinking, the emancipatory and the relationship approach where:

- *The Functional* approach requires a timetable, clear objectives, and regular meetings.
- *The enculturation* approach is focus on encouraging the research student to become a member of a research community, to understand and apply the methods of good practice in the discipline and technical skills.
- *The critical thinking* approach concentrates on the research enquiry and how it contributes original knowledge.
- *The emancipatory* approach concentrates on the personal growth and journey of the research student and the
- *The Relationship* approach focuses on creating an emotionally intelligent relationship between supervisor(s) and student(s).

These different approaches are complementary, and the boundaries between them are permeable. They form a useful basis for disaggregating different beliefs and actions in the supervisory processes.

Methodology

There are three sources of data to be consider, a small-scale study with non-participant observation, the transcripts from two supervision sessions, a short interview and a survey instrument (based on Lee' study), which was send after the supervision sessions to supervisors and PhD students, the results from surveys are compared with observations.

The Small-Scale Study

The study consists of observing two supervision sessions between a supervisor and a PhD student. Each session was carried out in different schools to make a "neutral analysis". Likewise, the observers did not speak or give an opinion of any kind. Neutral is as a self-evident norm in the social sciences. Based on (Malgorzata, Magnus, & Katarzyna, 2018) direct non-participant observation method was conducted through the next steps: The Focus, the Field, the Access, Participants/ Observers, the Criteria and Notes taking.

The Focus

In order to have a clear purpose for carrying out an observational investigation, the main points to observe were first: Identify the supervisory style, using keywords, based on the Five approaches of Lee's framework: Functional, Enculturation, Critical thinking, Emancipatory and Relationship, and after that identify what are the

challenges and rewards that the supervisor has in a multidisciplinary environment base on a short interview.

The Field

This point is referred to physical place and the area where is the observation research. The first session was in the School of Engineering (JTH) in the department of Product Development, Production and Design (PPD). The second session was in the International Business School (JIBS) in the department of Business Administration (BA).

The Access

To get permission from participants, the observers talked with the main supervisor from their respective areas and managed the appointments, then the observers let them know that they will be observed, what the purpose of the observation was, and how their information will be used.

The first session was in the School of Engineering (JTH), on November 1st, 2022, from 15:30 to 17:00 (90min). The second session was in the School of Business (JIBS), November 16th, 2022, from 8:30 to 10:00 (90min).

The Criteria

The observations were focus on the supervision style based on five approaches of Lee's framework (Lee, 2012). The behavior from supervisors and the PhD students, how they were present and connected with the situation were observed. The observations were objective and unbiased. It was keeping detailed notes of what is observed and avoiding any personal interpretation of the data. The participants should not be aware of the observers, in order to avoid any potential bias in their behavior.

Participants

In this small-scale study were two Professors, three Assistant professors and two PhD students from two different schools. Two Assistant professors participated in two supervision sessions as observers. Table 1 shows the position, the role, the code, the field, and the school of participants. One Assistant Professor works in the Business Administration (BA) department from JIBS, and the other Assistant Professor works in the Product Development, Production and Design (PPD) department from JTH. The main supervisors are Professor in Product Development, Production and Design and Professor in Business Administration. One Assistant professor participated as co-supervisor and works in PPD department. The PhD students were from JTH and JIBS respectively.

Notes Taking During Two Sessions.

During the sessions was gotten permission from participants to record the sessions, and notes were taken.

The survey

The instrument survey was taken from Lee's study (Lee, 2012) which consist in a questionnaire of 20 questions (see appendix section). There were two different surveys, one to supervisors and one for PhD students. There were sent to 4 supervisors and 4 doctoral students.

Table 1. Participants

Position	Role	Code	Field	School
Professor	Main Supervisor	MS	PPD	JTH
Professor	Main Supervisor	MS	BA	JIBS
Assistant Professor	Co-Supervisor	CS	PPD	JTH
Assistant Professor	Observer	O	BA	JIBS
Assistant Professor	Observer	O	PPD	JTH
Doctoral Student		DS	PPD	JTH
Doctoral Student		DS	BA	JIBS

Analysis and Results

This section shows the analysis from observations of the first and second sessions. It's explored how the observations are related to supervision style in a multidisciplinary environment based on Lee's framework.

The Small-Scale Study, Non-Participant Observation

First Session

The goal of the first supervision session was to discuss about the feedback that the PhD student received during his Final Seminar which was carried out on October 16th. The Main Supervisor (MS) started with the management of time, deadlines for applications and the coordination of opponent and committee participants for the next events. The first challenge detected was to have the ability to join people at the same time from different places (in a different country in this case), after that, they began to review the thesis progress that the student had previously submitted.

The co-supervisor focused on the structure of the thesis and mentioned relevant points such as its scope and contributions and the MS suggested how to structure the framework and the connections between published papers, provided highlight to present the results and the contribution with relevant questions. Since the PhD Student (DS) is in the last stage of his doctorate, they discussed how to structure the thesis with all the papers, contributions, and results. The MS suggests feedback on how to conduct the thesis but gives freedom to decide.

Second Session

The session started with a short presentation, the DS is in the beginning of his PhD, so they have had few meetings. The MS mentioned that they never work together before. During the second session the literature review and searching for the research topic was discussed. The DS showed his search of different publications, according to his interpretations how they are connected. Different opinions were discussed from different perspectives at the end, they found a starting point. MS provide relevant advice, suggested theories, methods, and strategies.

The MS visualized what kind of courses the student needs. Another observation was from the perspective on MS, she saw the potential of novelty of the research and mentioned the name of two colleagues who are the experts on topics related with the research, as an observation, the MS visualize the team group and the next courses that the student needs. The plan of courses and suggested time were mentioned.

Finding the Supervision Style

After the sessions, the transcripts from recording were analyzed and summarized. It was identified relevant keywords, as Feedback, Management, Reflection, emotional intelligence, and organization, then they were related to the five approaches of Lee's framework.

Functional

Related to observations and the functional approach, both MS showed good organization, in the first session, meetings are organized, when is necessary, while in the second session, meetings are planned every week, in this case, is needed because is the beginning of the research. Management of time and people are clear in both sessions.

Enculturation

It is an approach related to the discipline, the group, for international students, the enculturation in a national culture. During the observations, both sessions had international students and seven published papers by one student demonstrated discipline, good knowledge of internal and external regulations, and adaptation to the country.

On the other hand, the planning of meetings, the focus on the academic needs of the students for the next five years and the search for people with specific knowledge showed as a kind of welcome to the team. Multidisciplinary aspects were also shown, in both sessions there has been participation in multidisciplinary environments. In the first session, the DS is working with companies.

Critical thinking

It is an approach related to the values of philosophical rigor, and the force and validity of the arguments. Both sessions showed a high level of expertise, the first focused on writing a report, the structure and how to highlight results and contributions. In the second session, the discussion was a guide to find the scope and gaps.

Emancipation

This approach focuses on the journey through the doctoral process, the process of changing a student's worldview, and seeing supervisory work at the doctoral level. The personal growth was very clear when one student is in the beginning process and the other is in the last step. While one seeks a scope the other is adding their contributions. Different things happen during the process, the evolution of knowledge, maturity, and adaptation.

Relationship

Emotional intelligence is a valuable skill, being an expert in a field with the help of emotional intelligence to guide people. Creating an environment of respect, value and belonging to the team is necessary to motivate students, however, there must be a good balance between the professional and the friendly zone. As shown in the first session, the environment was focused on work but considered important aspects, it was observed when the MS asked about the parents' time, this shows respect and consideration. Another observation was shown when the MS and the CS suggested ideas but left the student free to make his decision. It happened in the same environment during the second session, the MS made suggestions but let the student find his topic with support.

As a summary, Table 2 shows in the first column the role of the participants, at the top are the five approaches and the relationship between the keywords related to the participants.

Table 2. Relationship between the Keywords from observations and the five Lee's approaches.

Role	Functional	Enculturation	Critical Thinking	Emancipation	Relationship
Main Supervisor (MS)	Review thesis progress, Provide feedback. Management/Time	Project management. Create team/ review committee and opponent	Evaluation, questioning about contribution and results	Mentoring Supporting constructivism Reflection	Developing a relationship/team Emotional intelligence
Co-supervisor (CS)	Review thesis progress	Diagnosis of deficiencies, weakness	Structure of report, provide	Supporting constructivism Reflection	Emotional intelligence Developing

			feedback with relevant points		relationship
Doctoral student (Ds)	Present advances from the last seminar Organized Listened feedback	apprenticeship	Constant Working hard. Wrote seven papers	Personal growth	Emotional intelligence, Good team Good relationship with supervisors

The Supervisions Challenges and Rewards

The Challenges

After sessions the observers asked to supervisors what are the challenges and rewards of supervision? And the answers are classified based on the five approaches.

Functional

The main challenges related to time management.

... there is the fuzzy beginning where the student doesn't know what to do or is expected. As it is part of the initial work to set the scope, I cannot give the answer (as I don't have it). This can cause some frustration.

... Individualized. No distance. To know and understand the student and adjust the level of supervision to him/her. I am also adjusting my supervision to the moment in the process.

I am transitioning from a laissez-faire (leave alone) approach to a more superstructure one, with clear deliverables and continuous meetings.

Enculturation

The technical skills. The ability to manage a situation.

...writing of publication that can be difficult in the beginning and especially of the student cannot produce any text (and I cannot write for them). Then extra efforts are required to break I down in small pieces and have regular meetings.

Emancipation

The project direction.

Another challenge is when the PhD student is not involved in any research project. Then they need to carry out all empirical work on their own which is not so easy, especially not in the initial phases, and it might not be so inspiring to be all alone for 4-5 years.

Critical Thinking

This approach values philosophical rigour, the strength and validity of the argument which needs to be tested in as many ways as possible. A specific situation that is challenging is when a journal article is rejected after 1-2 years of reviewing and revising. Even if I as a supervisor consider the work as acceptable it is not my decision in the end. To get a rejection after a more than a year is critical for the whole process, and it also shows that the scientific peer review process and assessment of scientific work is not predictable. It can also affect the confidence on me as a supervisor.

Relationship

...Another challenge is when a student's confidence is low, and you need to balance official role as a supervisor and the role as colleague/mentor. You know that academia can be a tough environment, and, in the end, you need to fulfill the different requirements within a given timeframe to complete the studies and earn your PhD degree.

...When I dislike the student personally. It is annoying. I try to ignore the personal side in those cases, but it is not fun.

The Rewards

...The reward is when the students submit their first paper, when a paper is accepted, when they show knowledge and confidence in discussions of their work, when they acknowledge what you have done to support them, to see them happy, to see that they create their own network and become "independent", to share the happiness when they have finally earned their PhD exam. These are some examples of rewards during the whole journey.

... The accomplishment against all odds! Finding out how to address the main challenge in the student. The moment of breaking through.

Survey Results

There were two different surveys, one to supervisors and one for PhD students. The Score is done (see the appendix) and is shown in this section. Figure 1 shows the results of survey sent to four supervisors from engineering and business field by email. One of the most highly rated approaches to supervising research in academic supervisor were the *Relationship* approach with 19 of 20 points and the less points were *Functional* and *Enculturation* with 17 of 20 points.

Figure 2 shows the results of survey sent to four PhD students from engineering and business field by email.

The most highly rated approaches to supervising research was the *Critical thinking* approach with 20 of 20 points responses and the less points were *Functional* with 16 of 20 points.

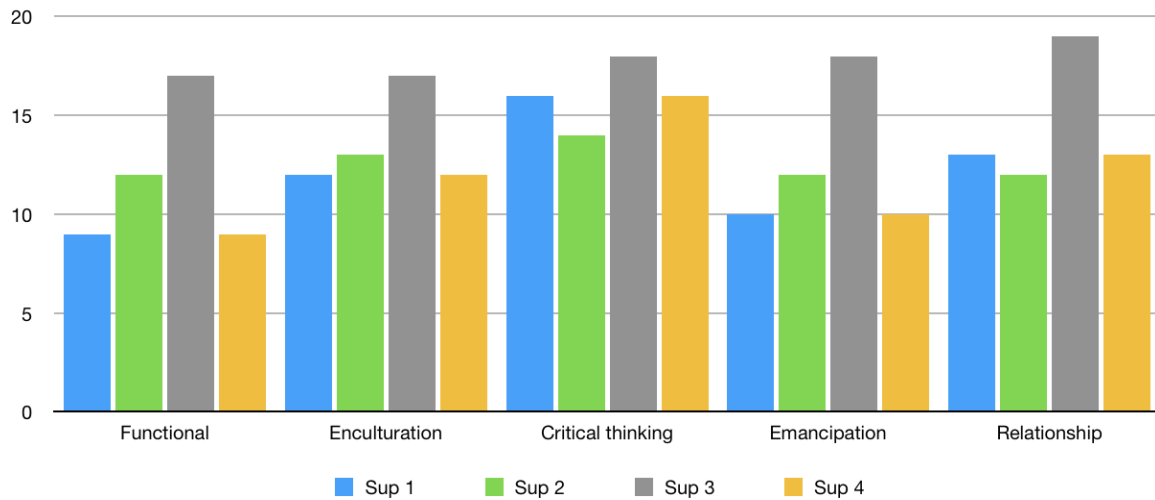


Figure 1. Results of the Supervisors survey

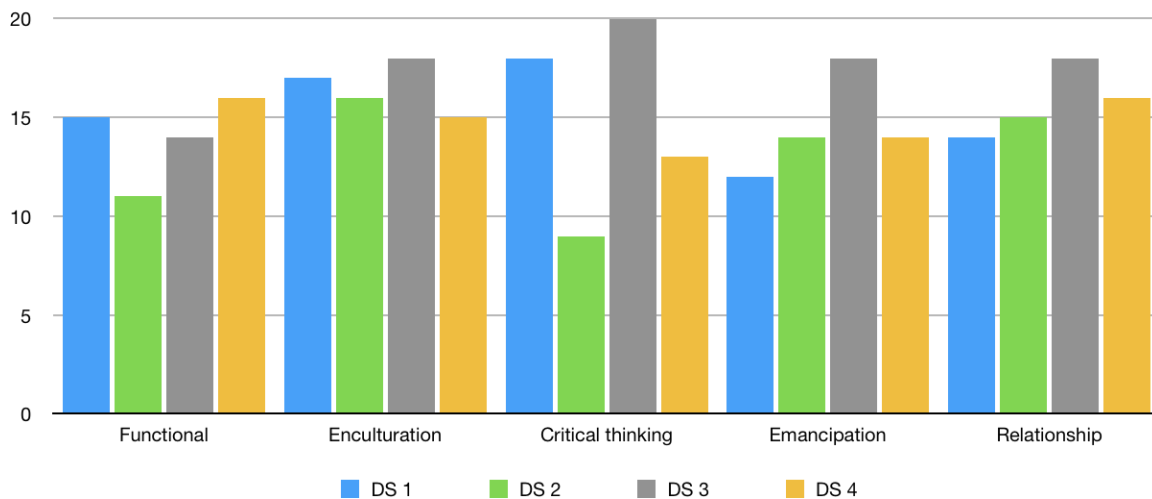


Figure 2. Results of the PhD Students survey

Table 3 shows a comparison between the results of directors and doctoral students. Supervisors focus more on the *Relationship* approach and PhD students on *Critical thinking*.

Table 3. Results from surveys

	Supervisors	Students
Functional	17	16
Enculturation	17	18
Critical thinking	18	20
Emantipation	18	18
Relationship	19	18

Discussion and Conclusions

Which approach do the supervisors think are the most important in supervision research? In one study, one of the highest rated approaches to supervise research in the academic supervisor was the *Functional* approach with 66% responses from supervisors and the second was *Critical thinking* with 61% (Lee, 2018). However, compared to the survey results, the *Relationship* approach was the highest ranked approach, and the second approach were the *Functional* and *Enculturation* approach with 17 points respectively.

Many factors are involved during PhD studies and postgraduate supervision, the main challenges related to time management, the *Functional* approach, it is during the initial work to establish the scope, this takes time and affects the entire process plan, the research project and team, in the case of a multidisciplinary project, could affect the time of others. However, the *Relationship* approach is also important, building a good relationship between the team (academia, companies, government, etc.) helps the process flow and gives time to complete the studies and obtain the PhD.

Which approach do the PhD students think is the most important in doctoral research? According to the results of the survey, the best rated approach was *Critical Thinking*, which assesses the strength and validity of the arguments. At the beginning of the doctoral studies, the exploration of the research topic and the contribution of solid arguments are important when the students present their progress, during the observations it was verified that finding the scope and gaps in the initial stage generates confidence in the students, At the same time, writing a report with good structure and strong arguments builds a strong foundation for article writing and confidence for both the PhD student and the supervisor.

These are some challenges that supervisors and PhD students may have during the doctoral studies, however, finding our style and knowing the style of our students is a good tool to guide us on how to supervise. There are no rules on how to “be” a good or successful supervisor, but tools like the five approaches, presented in this document, can be used to guide us, and help our students. This study has been a small-scale study, and more experiments are needed, however it could provide insights to identify our style. Finding our supervisory style helps to improve our abilities to supervise and help our students, participating in courses to improve our skills helps to update our knowledge and adapt to trends. Modern PhD students, modern supervisors must adapt to new trends, intercultural and multidisciplinary projects. We are living in an era of rapid changes, where the knowledge getting obsolete fast. Internationalization has challenges and rewards; the diversity of cultures and different perspectives could provide innovation during research.

Recommendations

Integrating a good team based on the supervisory style and knowing the type of PhD students could provide a better understanding to guide the students to do good research. Having clear guidelines and creating the

environment for good communication are good starting tools. Through this small study the authors have discovered their own style giving ideas of priorities as a supervisor. Discovering our own style first, our self-recognition process, is a good start to get to know others and create a better team and environment.

Acknowledgements

Thanks to Jönköping University (JU), the School of Engineering (JTH) and the International Business School (IBS), especially many thanks for the participants, the organizers of the Supervision Postgraduate Studies Course, FLHDK32 code from JU and the PED Group from JU.

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Appendix

Supervisor version

Questionnaire to enable a deeper understanding of different conceptual approaches to teaching and supervising postgraduate students:						
Place one tick in a box on each line to indicate the level of importance you attach to that item.		Unimportant		Important		
ID	Question	1	2	3	4	5
1	I always allocate time well ahead for preparation, teaching and marking work for my postgraduate students					
2	My postgraduate students learn how to replicate the practices, procedures, and ethical principles important to this discipline					
3	I want my postgraduate students to think critically, always to recognize flaws in articles, arguments or work that they see					
4	It is important that my postgraduate students understand what motivates them and they examine why they are doing this research					
5	My postgraduate students can manage their own and others' emotions appropriately					
6	I consciously plan my teaching and supervision sessions so that my students will reach the appropriate level					
7	I feel disappointed if good postgraduate students do not want to continue studying or working in the discipline					
8	I want my postgraduate students to demonstrate an independence of mind					
9	My postgraduate students are frequently transformed personally by the work they are doing					
10	I enjoy meetings with my postgraduate students					
11	A research student has to send me something they have written, to demonstrate they are making progress, before I will meet with them					
12	It is important that my students understand the work of key researchers in my field					
13	It is important to me that students can put forward counterarguments					
14	My students often go through a 'dark night of the soul' while doing their research, but emerge stronger for it					
15	It is important that my students maintain positive working					

	relationships with colleagues and help them as required					
16	I note in my diary key dates for tutorials, annual reports etc. so I can monitor progress					
17	I frequently show examples of interesting and excellent work in my field to my postgraduate students					
18	Successful postgraduate students are able to validate or evaluate their arguments in abroad or interdisciplinary way					
19	My postgraduate students learn to reframe the important questions					
20	My postgraduate students enthuse others with their interest in their work					

Student version

Questionnaire to enable a deeper understanding of different conceptual approaches to learning postgraduate students:

Place one tick in a box on each line to indicate the level of importance you attach to that item.

		Unimportant					Important				
		1	2	3	4	5	1	2	3	4	5
1	I always like to have a date arranged for the next meeting before I leave the current session										
2	I want to understand and be able to replicate the practices, procedures and ethical principles important to my discipline										
3	It is important to be able to think critically, always to recognise flaws in articles, arguments or work that I see										
4	It is important that I understand what motivates me and I examine why I am doing this research										
5	I think I manage my own and others' emotions appropriately										
6	I keep copies of records of each meeting with my supervisor										
7	I want to continue working in this discipline when I have finished my studies										
8	I want to demonstrate an independence of mind										
9	I expect to become a different person, to be changed or transformed by the research work I am doing										
10	I enjoy meetings with my research supervisor										
11	I like to send my supervisor something to read before I meet with them, to demonstrate I am making progress										
12	It is important that I understand the work of key researchers in my field										
13	It is important that I am able to put forward counter-arguments to propositions										
14	I may go through periods of self-doubt, a 'dark night of the soul' while doing my research, but I will emerge the stronger for it										
15	It is important that I maintain positive working relationships with other departmental staff and help them Integrating										
16	I note in my diary key dates for annual reports etc. so I can monitor my progress										

17	I look for examples of interesting and excellent work in my field to emulate					
18	I believe that successful researchers are able to think in a broad or interdisciplinary way					
19	I think it is important to learn to reframe the important questions					
20	I can enthuse others by my interest in my work					

Scoring your profile									
Add the scores up for the following numbers, and it will give you some idea of your priorities as a supervisor.									
Q. no.	Score	Q. no.	Score	Q. no.	Score	Q. no.	Score	Q. no.	Score
1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18		19		20	
Total functional score		Total enculturation score		Total critical thinking score		Total emancipation score		Total relationship score	

Adapted after Shalfawi (2016) and from Lee (2008b)

Teachers' Use of Smart Boards in the Schools: A Review of Graduate Thesis Conducted in Turkey

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Abstract: With the constantly developing technology, the education given in the schools has become far beyond the classical understandings and equipments. Such a transformation has made it compulsory for teachers to have some competencies, to acquire some skills, and to use technology above a certain level. Turkey is aware of the importance of using technology in education and thus equips public schools with state-of-the-art technological tools via a reformist project called FATİH. Within the scope of this project, smart boards were installed in each classroom. Since this integration, teachers have been using these tools and researchers have been investigating their usage. In this study, a literature review was conducted to explore teachers' use of smart boards in Turkey. The research reviewed this study is limited to graduate theses completed in universities in Turkey and published by YOK thesis center. The relevant studies were accessed by using the keywords such as "smart board", "smart board use and "teacher's use of smart board". The studies found as a result of this scanning were filtered and summarized through the use of 4N1K methodology. As a result, it was concluded that teachers' use of smart boards differed in terms of branches, demographic characteristics, computer usage, status of receiving in-service training, and technological predisposition. In addition, while there were studies on the use of smart boards in different branches, no study has been found on classroom/primary teachers in the literature.

Keywords: Smart board, Teachers' usage, Graduate thesis, Literature review

Citation: Eynel, O. & Koc, M. (2023). Teachers' Use of Smart Boards in the Schools: A Review of Graduate Thesis Conducted in Turkey. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 464-472), Denver, CO, USA. ISTES Organization.

Introduction

The world is in a rapidly developing process in recent years. Especially in the 21st century, this development has gained a great momentum. The places where children spend most of their time have shifted from streets to schools, and therefore schools are expected to be multi-purpose. Now schools are institutions that prepare our

children for the life. The rapid development of information and communication technologies, the higher expectations of people from life, the problems that humanity has to solve in the new world (sustainable energy, global warming, epidemic diseases, health problems, refugees, etc.) are seen as the reasons that accelerate the change. Change has also removed educational institutions from their traditional definitions. The main goal of the schools is now to raise individuals who have the skills to solve aforementioned problems through education. These skills, called 21st Century skills, include but not limited to reading/language skills, mathematics/science literacy, critical thinking and problem solving, communication and cooperation, creativity and innovation, taking initiative and self-direction, productivity and accountability, and media literacy (Yurt, 2023).

Teachers who can train students with the skills mentioned above are expected to be able to keep up with the times, have a command of technology and use it effectively in their classrooms. According to the teacher standards determined by the International Society for Technology in Education (ISTE), teachers should:

- support student learning and encourage creative and innovative thinking,
- design and develop the learning experiences and assessments required by the digital age, ensuring that students become responsible for their own learning and manage their own learning processes,
- demonstrate competencies appropriate to the digitalizing world, collaborate with students, parents and colleagues in collaboration via digital tools in order for students to be successful and innovative,
- inform about digital citizenship and responsibility on regional and global issues,
- contribute to their professional development through digital tools (ISTE, 2016).

With the constantly developing technology, the education given in schools has become far beyond the classical understanding and completely intertwined with technology. It is impossible to exclude technology, which has entered every stage of life, from education. The continuous improvement and renewal of education and the search for new methods are among the reasons why education cannot be separated from technology. Educational technology can be defined as creating favorable environments for facilitating learning and increasing success. The purposes of educational technology include adapting the training centers to life, increasing the efficiency of the training employees, and regulating and controlling the environmental variables. The understanding of education, which can no longer stay out of technology, has also made it compulsory for teachers to have some competencies, to acquire some skills, to use technology above a certain level even if they are not in their interests.

Turkey is also aware of the importance of using technology in education and therefore has implemented a nationwide reform movement in education called The Project of Increasing Opportunities and Improving Technology (FATİH) since 2010. It was initiated for the effective use of information technology tools in lessons, in a way to appeal to more sense organs in the learning-teaching process, in order to ensure equality of opportunity in education and training and to improve the technology in the schools. It has five main components as: providing schools with hardware and software, developing and managing educational e-content, in-service

training of teachers, conscious, secure, manageable and measurable use of technology, and effective use of technology in curriculum (MEB, 2011). With the FATİH project, schools were equipped with some state-of-the-art vehicles. Of these, smart boards were distributed to the schools. The number of smart boards installed in the schools reached 522,691 according to July 2022 data (MEB, 2011).

The smart board is a technological product that allows us to do everything we can do on any computer, with a giant screen operated only by touching. Until smart boards came out, computers and projectors were educational technologies that were used a lot in education. The use of computer alone made it difficult for the teacher, especially in large and crowded classrooms; projection has reduced this situation, but it has not been a complete solution. The integration of smart boards can reduce the workload of teacher and thus increase the participation and desire of the students towards learning (Demirbilek, 2022; Karaca, 2018).

There are several types of smart boards. The oldest one is those boards with pens. When the screen of the board is touched with the pen, sound waves are emitted from the pen and transmitted to the device. The device detects the location of the sound waves it receives, so it detects the movement. Most of the devices we use today are resistive. This means that when we touch the board, the board detects movement. When we touch the board, an electrical signal is generated. Those with capacitive surfaces have a conductive material inside the screen. It causes the voltage to drop when the screen is touched. The coordinates of the contacted point are calculated by the controller and sent to the computer. These systems allow more than one touch at the same time. This situation makes its use widespread. This technology is also used on the screens of smartphones, tablets and other touch devices. Infrared smart board systems work similar to that of a remote. When we touch the remote, the lamp called the LED at the end of the remote sends an infrared signal, in return, the receiver on the television processes the LED signal and sends it to the system. Infrared smart boards also work this way (Emko Egitim Cozumleri, 2020).

In Turkey, smart boards have started to be distributed to schools in three phases. The first phase covered distribution to high schools, the second phase to junior high schools, and the third phase to primary schools, kindergartens and newly built schools. If we look at the general features of Phase 3 boards, it has an i7 processor, 16 GB Ram, 512 GB SSD hard disk. In addition, the screen has a 65 inch 16:9 LED Panel 1920×1080 Full HD resolution (MEB, 2011).

Method

In this study, a literature review was conducted to explore teachers' use of smart boards in Turkey. The research reviewed this study is limited to master's and doctoral theses completed in the universities in Turkey and published on the web site of Council of Higher Education (YOK) National Thesis Center. A search was conducted using the search engine on the YOK's web page. The relevant studies were accessed by using the keywords such as "smart board", "smart board use and "teacher's use of smart board". The studies obtained as a

result of the scanning were examined and the full texts of the studies found suitable were read thoroughly. Annotated summaries were created and tabulated through including such information as citation (who conducted the study and when?), problem statement or purpose of the study, methodology (research design, sample, data instruments etc.) and main findings.

Results

As a result of the literature review, a total of 18 relevant studies were found. Of these, one was a doctoral thesis and the remaining 17 were master's theses. The data collection tools used in these studies were distributed as follows: Teachers' Opinion Forms (3 studies), Smart Board Acceptance and Usage Intention Scale (1 study), LCD Panel Interactive Board Attitude Scale (1 study), Attitude Scale towards Smart Boards in Visual Arts Lesson (1 study) and The Self-Efficacy Scale for Using the Interactive Whiteboard (2 studies). As far as the research methodology used is concerned, two studies was conducted using mixed methods, one study was conducted using quantitative methods while the rest of them were conducted using qualitative methods. Regarding the samples of the studies, six of them selected teachers from all branches in a mixed manner and the remaining were distributed as follows: physics teachers (1 study), mathematics teachers (1 study), music teachers (1 study), visual arts teachers (1 study), social studies teachers (3 study), science teachers (2 study), and religion and/or vocational courses teachers (3 study). The studies found in the review were categorized under three main themes: (a) studies examining teachers' opinions and experiences on smart board use, (b) studies examining teachers' attitudes and self-efficacy towards smart board use and (c) studies examining the level of teachers' use of smart boards

Opinions and Experiences on Smart Board Use

Some studies have examined teachers' opinions and experiences regarding the use of smart boards in their classroom teachings. For example, Altincelik (2009) explored the opinions of 132 primary school teachers about the suitability of interactive whiteboards for primary school teaching. Data were collected using a questionnaire form. According to the her findings, participating teachers think that teaching lessons using smart board gives better results in permanence of learning and student motivation than traditional methods, attracts students' attention and enables them to participate more actively in the lesson, but occasionally cause technical problems which cause a waste of time or slow down in-class activities.

Akgun (2014) investigated student attitudes and teachers' views on the use of smart boards in mathematics lessons. He carried out this research with seven teachers and 220 7th grade students who received lessons from teachers who had experience in the use of smart boards for 3 years or more. The research is a survey model study and quantitative data were collected. As a result, teachers believe that the use of smart boards has a positive effect on students, increases interest in mathematics, and makes learning permanent.

Cicek (2014) examined the opinions of teachers working in secondary schools on the effect of using smart boards installed in classrooms within the scope of FATİH project on permanence in teaching and motivation of students with quantitative and qualitative data. She reached the conclusion that teachers use smart board effectively, make learning permanent if technical problems are not experienced, and increase motivation for the lesson. Moreover, teachers think that the use of smart boards saves time, enriches teaching by providing visual and aural features, and provides great convenience for teachers to handle subjects that are difficult and complex for students to understand.

Saruhan (2015) collected the opinions and expectations of music teachers' about smart boards using a questionnaire technique with 218 music teachers working in different types of schools. According to the results, it was observed that the teachers actively used the smart board. Smart board was viewed as successful both in increasing the motivation of students and teachers and in ensuring the permanence of learning with its unique features. Participants reported the inadequacy of the internet infrastructure, the lack of software and the inadequacy of in-service training programs. Considering the opinions of the teachers, it was concluded that the use of smart board could be made more effective by taking the necessary in-service training and eliminating the software and hardware deficiencies.

As a part of his master thesis, Hicyilmaz (2015) examined visual arts teachers' opinions about the use of smart boards in the Visual Arts courses. The research was descriptive in nature and designed by survey methodology. Participants stated that they learned how to use the smart board with the in-service training they received; they were insufficient in the use of smart boards; that the smart board had a positive effect on the academic success of the students; made the student active; provided advantages such as visual learning and increasing the positive attitude of the student towards the Visual Arts course. They also stated that the most common problems they encountered while using the smart board in the Visual Arts lesson were the limited gallery for the Visual Arts lesson, the lack of infrastructure, and the difficulty of accessing the Internet.

Karaca (2018) explored the views of social studies teachers who started using smart boards within the scope of FATİH project. Using a mixed model of research approach, he used a questionnaire technique in the quantitative dimension and a semi-structured interview form in the qualitative dimension. The data analysis indicated that the use of smart boards provided convenience in using visual elements, activated the students and increased their attention, was effective in embodying abstract subjects and saved the use of many teaching materials. In addition to these, it was determined that there were limitations in the use of smart boards such as power cuts, disconnection from the Internet, technical malfunctions and problems encountered in their solution, and the lack of ready-made materials suitable for social studies disciplines.

Attitudes and Self-efficacy towards Smart Board Use

Kaya (2019) examined the technopedagogical education competencies of social studies teachers and their self-efficacy in using smart board and determined the relationship between them. He used a mixed research

methodology and collected data from 101 social studies teachers working in secondary schools. According to the results obtained, it was determined that social studies teachers' self-efficacy levels for the use of smart boards were above the average level; differed significantly according to the information technology education and daily use of the smart board; moderately and positively correlated with technopedagogical education competencies; but did not differ significantly according to gender, age, seniority, and computer use proficiency.

Kurt (2021) inspected teachers' attitudes towards acceptance and use of the smart board. Using a descriptive survey methodology, he collected data from 343 teachers working in primary, secondary and high schools through the use of Smart Board Acceptance and Intention to Use scale. He determined that teachers' intention to accept and use the smart board is at a high level. There was no significant difference in teachers' level of acceptance and intention to use the smart board according to gender, graduation, educational status, type of school they work, marital status, seniority, age and education on smart board. However, significant differences were found according to school level and branch.

Demirel (2019) investigated the relationship between teachers' digital competence levels and their use of smart boards in teaching. His research included 431 teachers working in 50 secondary schools in 16 different provinces and used the Digital Empowerment Scale as a data collection tool in the study. According to the results of the research, it was seen that the digital competence level of the teachers was high and there were positive and significant low-level correlations between digital competence level and the weekly smart board usage time and the positive opinions about smart boards.

Solak (2012) investigated the attitudes of teachers working in primary and secondary education towards the use of smart boards according to the technology acceptance model. The research was descriptive and conducted in the survey model. The study group consisted of 230 teachers selected through simple random sampling method. As a result of the research, it was determined that perceived usefulness, perceived ease of use and subjective norms of teachers for smart boards had a linear effect on their intention to use smart boards.

Citil (2019) determine teachers' anxiety levels about smart boards and their computer self-efficacy perception levels as well as the relationship between them. She applied the Smartboard Anxiety Scale and Computer Self-Efficacy Perception Scale on a sample of 712 high school teachers. Teachers' failure and stress levels in the use of smart boards were found to be low. Furthermore, computer self-efficacy perception level was found to be negatively correlated with different dimensions of smart board anxiety levels.

Usage of Smart Boards

Kizilkaya (2018) used the survey method to determine teachers' use of smart boards in terms of various variables with the sample of 100 social studies teachers working in 50 public and private secondary schools. He concluded that the participant teachers used smart boards at a moderate level on average. In addition, it was observed that the level of use of smart boards did not change significantly according to age, gender, length of

service, and education level.

Soylu (2018) conducted a study to determine the use of the smart board installed in schools within the scope of FATİH Project of science teachers. She used a descriptive survey research design and collected data from 146 teachers who teach 5th, 6th, 7th and 8th grade science lessons in public secondary schools. She found that teachers use the smart board effectively, mostly by connecting to the internet; using it the most in biology-related courses and least in physics-based courses; using it the most for evaluation and supporting the lesson with visuals and animations and least for reading and listening activities. The most common problems faced by teachers when using the smart board were slow Internet connection, broken or frozen touch screen.

Yalci (2019) observed the smart board use skills of religion and vocational high school teachers in his study. He collected the data through semi-structured interview forms with 22 religion and vocational lessons teachers working in primary, secondary and high schools. He concluded that participating teachers were very willing to use smart boards in their lessons, they tried to use modern teaching methods-techniques to make the lesson more attractive, and they strived to enrich the course materials. However, he also revealed that they had some difficulties in terms of technological infrastructure in schools, they did not receive support from other stakeholders of education (student-parent-teacher-school administration) for various reasons and they needed some training on the use of technology.

Tatli (2014) explored the usage of interaction features of smart boards of teachers working in secondary education institutions in terms of a number of variables. He utilized a mixed method approach in his research and the sample for the qualitative part of study included 535 teachers working in schools within the scope of (FATİH) Project pilot implementation schools. As a result, the level of teachers' use of the interaction features of the smart board did not vary across gender, education level and branch whereas significantly differed by professional experience, city, computer ownership, computer experience, internet experience, smart board training, smart board training in their own field, previous use of smart board, duration of board use, frequency of smart board use and recommending smart board use.

Conclusion

This study reported the findings of literature review of graduate thesis conducted in Turkey about teachers' usage of smart boards. The target population and sample of the studies were branch teachers. Hence research focusing on classroom teachers who work in primary/elementary schools was not investigated. There is no thesis in the literature that covers all teachers including both classroom and branch teachers or compare them. The review reveals that there has been no experimental research conducted in the relevant theses.

The studies were grouped in three main categories. The first category is about the opinions of teachers about smart boards. Generally speaking, teachers believe that unless technical problems are experienced, the use of

smart boards increases the motivation of students to participate in the lesson and makes learning permanent. They think that the use of smart board can be made more effective by taking the necessary in-service trainings and eliminating the software and hardware deficiencies. It has been observed that there is no difference in the opinions of teachers regarding the use of smart boards by age, gender, length of service, and education level. The second category is about psychological traits related to smart board usage. Some teachers state that they find themselves psychologically inadequate in the use of technology and they are hesitant to use smart board because they do not trust themselves. The high level of digital competence of teachers, the in-service training they receive, and their computer usage history seem to increase their use of smart boards. The third group of studies is related to the usage of smart boards. The findings indicate that the level of smart board use of teachers who can use computers or receive in-service training on the use of smart boards was mostly at the level of writing, watching visuals, and using online materials. The characteristics of teachers such as age, gender, years of service and education level do not affect the level of smart board usage.

The review indicates that in the studies the use of smart boards by teachers is not detailed enough as professional usefulness and superficial observations are made. Since the efficient use of smart boards is really important for the future of the FATİH project, it is important that the situation should be examined from this perspective as well. Almost all studies conducted as a part of master's degree and only one study is germane to doctoral degree. Doctoral students may be encouraged and advised to study this topic in order to support teachers' smart board usage. The smart boards distributed to the schools constitute a whole in terms of Turkey's economy, as they are expensive tools with the latest system features in terms of technology. It is important to continue investigating the use of boards as the inadequate benefit of these high-cost vehicles harm the country.

Notes

This study was produced within the scope of graduate study conducted by the first author under supervision of second author in the Graduate School of Educational Sciences, Suleyman Demirel University, Isparta, Turkey.

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Game Players' Views on eSport

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Abstract: eSports, also known as electronic sports, is a growing phenomenon that has captured the attention of millions of people around the world. It is a form of competitive video gaming where players compete against each other in various video games. These competitions can be organized in the form of tournaments, leagues, or individual matches, and they can be played on a variety of platforms, including personal computers, gaming consoles, and mobile devices. eSports has grown rapidly in popularity in recent years, with millions of people tuning in to watch live events and matches online or in-person. In fact, it has become so popular that it has been recognized as a legitimate sport by many countries and organizations around the world. Therefore, the purpose of this research is to investigate gam players' views on eSport in general. The research consists of 151 participants who are playing computer games regularly with the age interval between 17 and 45. The survey data collected using Google Form. The questionnaire developed by the researcher was used as a data collection tool. The results of the research show that most of the participants are aware of eSport concept. Furthermore, 38.4 % of participants were attended eSport tournaments and had firsthand experience on eSport. 70.2 % Participants who attended eSport tournaments were expressed that they earned money at the end of the tournament. Half of the participant were followed eSport tournaments in live stream video. The results show that more than sixty percent of participants see electronics games as a sport.

Keywords: eSport, Game play, Electronic game, eSport tournament

Citation: Demirbilek, M. (2023). Game Players' Views on eSport. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 473-480), Denver, CO, USA. ISTES Organization.

Introduction

eSport, also known as electronic sport, refers to structured and competitive video gaming, pitting individuals against each other in online matches and live spectator events (Hamari & Sjöblom, 2017). It is a competitive form of video gaming, where players engage in online matches and participate in live spectator events held in indoor arenas, often competing for substantial cash prizes. Over the past years, e-sports has evolved from being merely an entertainment medium to a professional pursuit (Martoncik, 2015).

eSport has rapidly emerged as a significant cultural and economic phenomenon in recent years. Historically, eSport can be traced back to the 1970s, with the advent of early competitive video gaming tournaments (Consolazio, 2018). However, it was the proliferation of high-speed internet and technological advancements in

the 21st century that propelled eSport to global recognition. Competitive gaming has now evolved into a multi-million-dollar industry, with professional players, teams, and leagues supported by a vast fan base and lucrative sponsorships.

eSport embraces both amateurs and professional players, fostering inclusivity for all individuals, regardless of gender, physical ability, and other factors. The accessibility of eSport extends to various platforms, including PCs, consoles, and mobile devices. Countries classify sport differently. For example, Poland classify it as a sport. Some countries classify it as a game. For example, the UK classify eSport as a game. In 2019, global eSport revenues were projected to reach approximately \$1.1 billion, reflecting a remarkable year-on-year growth of 26.7% (Wijman, 2018). Each year, hundreds of tournaments are held, featuring massive prize pools that attract participants from all over.

eSport involves a multitude of diverse organizations, ranging from game developers and tournament organizers to venues, teams, platforms, and advisory services. eSports proves exceptionally captivating, especially among younger audiences, and when approached with moderation, it serves as a valuable alternative to passive media consumption such as television or social media. This thrilling team activity not only fosters engagement but also establishes meaningful connections to computing education, STEM subjects, and the enhancement of digital skills (Yurt, 2022). Educational institutions, including schools, colleges, and universities, have begun recognizing the significance of the eSport industry and its requirements. As a result, some of them are incorporating eSport modules into their courses, embracing this emerging field as part of their curriculum.

According to Linkinen (2021) advantages of eSport activities:

- Provide valuable cyber, digital, and transferable skills
- Enhance dexterity and concentration
- Boost student attendance and engagement
- Offer numerous intrinsic emotional rewards, promoting happiness!
- Emphasize character development
- Enhance perceptual and cognitive abilities
- Sharpen decision-making, reaction times, and multitasking skills
- Foster social interaction and effective communication
- Cultivate teamwork and community building

There also drawbacks of sSport Linkinen (2021) such as;

- Exposing gaming disorder,
- Impaired control over gaming, elevating gaming to a level where it supersedes other life interests and daily activities, becoming the primary focus.
- Persisting in gaming despite experiencing negative consequences, leading to its continuation or escalation.

- Overuse injuries
- Substantial time commitment

eSport has gained tremendous popularity in recent years, drawing millions of enthusiastic players worldwide. As the gaming industry grows, understanding the perspectives and attitudes of game players towards eSports becomes vital. This literature review aims to explore various studies that shed light on how game players perceive and engage with the world of eSports.

Numerous researchers have delved into the motivations of gamers, and despite variations in theoretical frameworks and studied video game genres, several general and common motivational patterns have surfaced through various empirical studies.

For example, Vorderer and his colleagues discovered that the fundamental elements driving gaming motivations are interactivity and competition (Vorderer 2000; Vorderer et al. 2003). Sherry and colleagues (Greenberg et al. 2010; Sherry et al. 2006) identified comparable motivational patterns among both graduate school and high school students who engaged in video games. These patterns encompassed arousal, challenge, competition, distraction, fantasy, and social interactions.

Yilmaz and Karaoglan Yilmaz (2019) investigated the opinions of students of faculty of sport sciences about eSports. According to the research findings, sport sciences faculty students exhibit uncertainty about the concept of e-sports. A significant majority of students, over half, perceive e-sports as a sporting discipline. E-sports were found to contribute to various aspects of students' development, including motor skills, motivation during leisure time, strategy development, quick decision-making abilities, hand-eye coordination, and fostering imaginative thinking, thereby supporting mental growth.

In the literature, there are limited studies regarding to explore game players' views on eSport Therefore this study aims to explore game players' views on eSport.

Method

The purpose of this research is to investigate game players' views on eSport in general. Therefore, a survey model was employed to conduct the research. Survey models are research approaches that aim to describe a past or present situation as it exists. The event, individual or object that is the subject of the research is tried to be defined within its own conditions and as it is (Karasar, 1998).

A questionnaire form developed by the researchers was used to collect the data. The questionnaire consists of two parts. In the first part of the questionnaire form, there are questions to determine the demographic information of the participants. In the second part, game players' views on e-sports.

Results

The research consists of 151 participants who are playing computer games regularly with the age interval between 17 and 45. 63 of participants were female and 88 of participants were male. The survey data collected using Google form. The questionnaire developed by the researcher was used as a data collection tool.

128 of the respondents reported that they live in Turkey. 23 of the respondents reported that they live abroad.

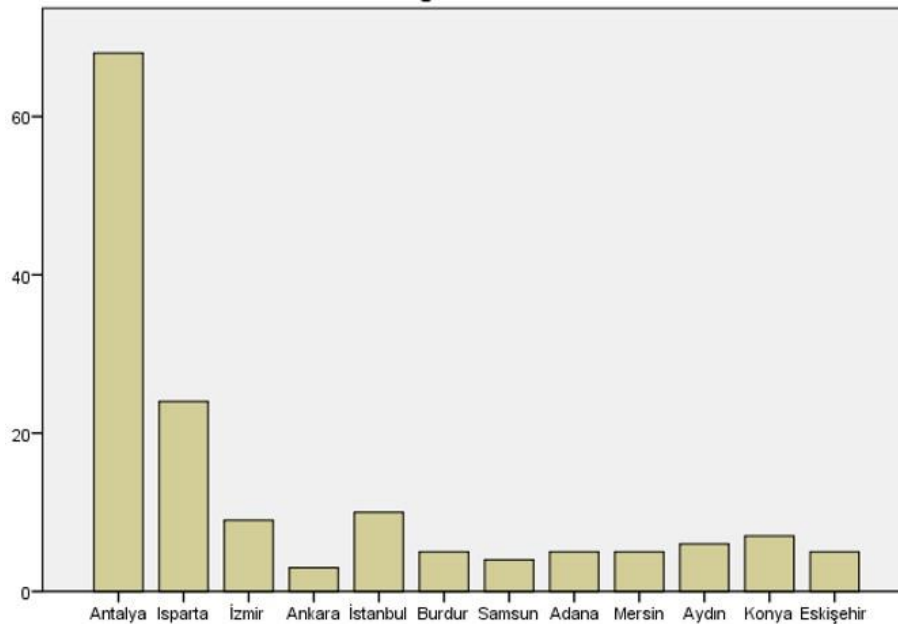


Figure 1. Distribution of Turkish participants by province

%46.4 of participants prefer playing games on computer. % 41,7of participants prefer playing games on mobile devices.

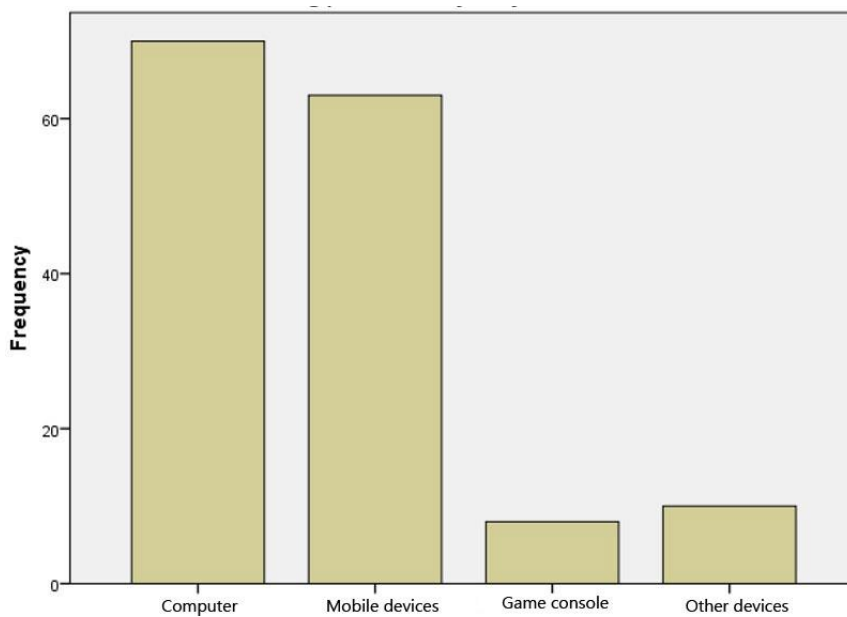


Figure 2: Distribution of devices game played

Most of the participants are aware of eSport. When asked to participants “have you ever heard about eSport?”; %77.5 of the participants answered “yes” for the question. Online %22.5 of the participants answered as “No”. Most of the participants of the survey are familiar with the eSports. %38.4 of the participant reported that they were participated to eSport tournament. Most of the participants (%70.2) believe that eSport players earn money when they participated to the eSport tournament. Almost half of the participants (%49.7) reported that they were watched eSport tournaments live. When participants asked about which video games they play often, they reported that the most played game was League of Legends (%22.5). The second most played game was FIFA, PES (%16.6). Counter Strike Global Offensive (%9.3) and Player Unknown’s Battlegrounds (%6.3) were the third most played game among the participants.

%29.8 of the game players were reported that they follow eSport game tournaments. Most of the participants (%54.3) accept that eSport tournaments as a sport. Participants reported that in order to join eSport tournaments players should take trainings. Participants (%76,8) believe that playing eSport may affect academic achievement.

Is eSport a profession? %78.1 of participants answered this question as “Yes”.

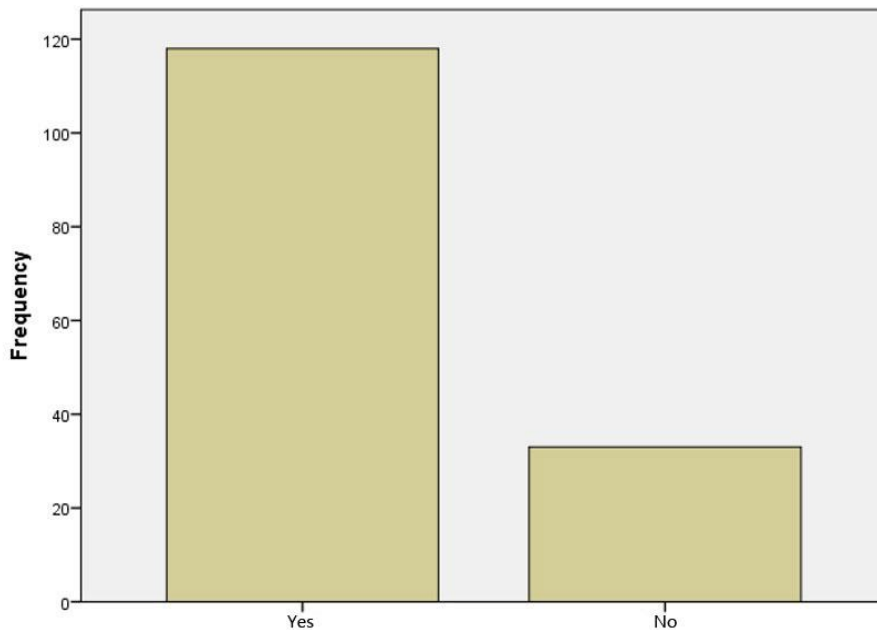


Figure3. Participants’ response distribution of the question: Is eSport a profession?

Do you support the introduction of eSport courses in schools? %84,1 percent of participants answered this question as “Yes”. This results shows that most of the participants supports the introduction of eSport courses in schools.

If eSport introduced to school as a course would you take the course? %51,7 of the participants answered this questions as “Yes”. This results shows that game players are willing to take eSport course when it introduced at

schools.

Discussion

Game players' views on eSports are multifaceted, driven by motivations for competition, recognition, and camaraderie. eSports holds value beyond entertainment, providing opportunities for skill development and social growth within the gaming community. However, it is essential to address concerns related to burnout and create a balanced and healthy eSports ecosystem that allows players to thrive both competitively and personally. Further research is needed to explore these aspects in-depth and gain a comprehensive understanding of game players' evolving perspectives on eSports.

The data gathered from the survey indicates a significant awareness of eSport among the participants. A majority (77.5%) of the respondents have heard about eSport, while a smaller proportion (22.5%) are still unaware of it. This suggests that eSport has gained considerable recognition among the target audience. Furthermore, a substantial percentage (38.4%) of the participants reported having actively participated in eSport tournaments. This finding indicates a growing interest in competitive gaming and a willingness to engage in the eSport community.

The perception of eSport as a viable career option is also evident in the results. A significant majority (70.2%) of the participants believe that eSport players can earn money when participating in tournaments. This shows that eSport is perceived as more than just a leisure activity, with potential financial rewards for skilled players. Live viewership of eSport tournaments is also notable, as nearly half (49.7%) of the participants reported watching eSport events live. This suggests that eSport has established itself as a spectator sport, attracting a considerable audience beyond just active players.

The prevalence of specific video games in the participants' gaming habits is also worth mentioning. League of Legends emerges as the most played game (22.5%), followed by FIFA and PES (16.6%), and Counter-Strike Global Offensive (9.3%). These statistics shed light on the popularity and influence of specific games within the eSport community.

It is interesting to note that almost one-third (29.8%) of the participants actively follow eSport game tournaments. This indicates a significant level of interest in eSport beyond mere casual gaming, with viewership being a critical aspect of the eSport ecosystem.

Participants' perception of eSport as a sport is encouraging, with a majority (54.3%) accepting it as such. This recognition contributes to the legitimization of eSport as a competitive activity comparable to traditional sports. However, concerns regarding the impact of eSport on academic achievement are prevalent, as 76.8% of the participants believe that playing eSport may affect their academic performance. This highlights the need for

balanced time management and awareness of the potential effects of excessive gaming.

Lastly, the fact that 78.1% of the participants consider eSport as a profession underscores the growing acceptance of competitive gaming as a legitimate career path. This acknowledgment may have positive implications for the further development and recognition of eSport on a broader scale.

In conclusion, the survey results depict a significant level of awareness, engagement, and acceptance of eSport among the participants. The data reflects the growing popularity of eSport as both a competitive activity and a spectator sport, with increasing numbers of individuals recognizing it as a viable profession. However, the potential impact on academic performance and the need for proper training underscore the importance of promoting a balanced approach to eSport engagement.

Conclusion

In conclusion, this research provides valuable insights into the gaming preferences of a diverse group of participants. The study consisted of 151 individuals aged between 17 and 45, who are regular computer game players. The sample included 63 females and 88 males, reflecting a balanced gender representation. The data collection was conducted efficiently using Google forms, and a researcher-developed questionnaire served as the primary tool for gathering information. The geographic distribution of respondents revealed that the majority (128) live in Turkey, while a noteworthy number (23) reside abroad, indicating the reach and global interest in the gaming community.

Regarding gaming platform preferences, nearly half of the participants (46.4%) expressed a preference for playing games on computers, while a significant proportion (41.7%) favored mobile devices for their gaming experiences. These findings emphasize the significance of both computer and mobile gaming markets, indicating a diverse gaming landscape that caters to varied preferences.

The results of the research show that most of the participants are aware of eSport concept. Furthermore, 38.4 % of participants were attended eSport tournaments and had firsthand experience on eSport. 70.2 % Participants who attended eSport tournaments were expressed that they earned money at the end of the tournament. Half of the participant were followed eSport tournaments in live stream video. The results show that more than sixty percent of participants see electronics games as a sport.

This research sheds light on the gaming habits and preferences of a sizeable sample of regular players, providing a valuable foundation for further investigations into the gaming industry's dynamics. Understanding these preferences can be instrumental in tailoring gaming experiences and content to suit the needs and demands of the gaming community effectively. However, future studies could explore additional factors such as preferred game genres, social aspects of gaming, and motivations for gaming to gain a more comprehensive understanding

of the gaming culture. Overall, this research contributes to the broader body of knowledge surrounding gaming trends and preferences, informing game developers, marketers, and the gaming community alike.

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Committed Pedagogy: Intersectionality in the Spanish Classroom

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Abstract: Representations of a nation's history work as a powerful tool to consolidate a collective identity and build trust in the nation. School textbooks are ideological products that disseminate official ideas about a collective past and heritage; their depictions have an impact on shared understandings of a nation's history. However, what is included and excluded from the official historical narrative is selective. Usually, Spanish educators have to use the materials established by the department. Unfortunately, it is very common to find in these books certain representations of Hispanic countries based on stereotypes. This presentation discusses notions of bell hooks - namely her concepts on teaching for social justice and intersectionality - and practical examples of textbooks to learn new ways to promote critical thinking of students and also educators. This has implications for classroom management, but also for curriculum design and education for social justice. This promotes cultural diversity and raising awareness of multicultural values.

Keywords: Critical Pedagogy, Second Languages, Social Justice, Hispanic Studies.

Citation: Palencia Gutierrez, J. (2023). Committed Pedagogy: Intersectionality in the Spanish Classroom. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 481-488), Denver, CO, USA. ISTES Organization.

Introduction

My intervention is based on postulations of Critical Pedagogy. This field understands education as a form of cultural politics, since it entails power relations that privilege and delegitimize certain ways of understanding the world and acting in it. From Critical Pedagogy, we seek to make this conflict visible; we seek to give visibility to the role of preservation of the status quo that education and educational spaces have, and reflect on it in order to deconstruct and understand the systems of oppression that exist in the society in which we live. According to Paulo Freire, one of the greatest exponents of Critical Pedagogy, the objective of education is liberation, which is understood as a process of horizontality in human relations that implies constant reflection on reality. Thus, through education for liberation, subjects gain the freedom to question, understand, and transform society.

Theoretical Background

Bell hooks, critical pedagogue crucial to this paper – who does not capitalize her name –, took up on Paulo Freire's notion of awareness. This term refers to the ways in which individuals and communities develop a

critical understanding of their social reality through reflection and action. Thus, awareness is a fundamental step in education for liberation. This involves examining and acting on the root causes of the oppression experienced in the here and now. hooks draws from feminist thought conjugated with the perspective of race, taking into account perspectives not raised in the characteristic meritocracy of white society, the meritocracy that excludes non-white subjects. Since the early 1980s, hooks wrote about the overlap of different factors – such as race, class, or gender – that play a role in systems and strategies of oppression. This phenomenon is known as *intersectionality*, term coined by Kimberlé Crenshaw almost a decade after hooks began writing about it.

We have, then, that diversity plays an important role in Critical Pedagogy in hooks' thinking, since we have to reflect on our diversity and differences in order to explore concepts and problems of inclusion, exclusion, visibility and social invisibility. bell hooks offers very interesting tools to think about and question how the curriculum and didactic materials that we use in the classroom offer a perspective of the world that serves to marginalize certain voices and ways of life in favor of a greater institutionalization and legitimization of values of the elite. These preferences for certain types of discourse reinscribe homogenizing systems of domination that are presented as universal.

We are currently in a very interesting moment regarding the articulation between diversity and curriculum – let us think of common debates regarding Critical Race Theory or the 1619 Project. The educational reform has been quite controversial in the political arena. One of the sides in this debate wants to prohibit conversations about structural, social, and historical racism within the school curriculum, justifying its position from the question of identity. This side attacks affirmative action proposals or other strategies that seek to create more diversity in the school/academic environment. Thus, a “neutral”, “apolitical” and “objective” curriculum is sought. Along the same lines, many educators support the idea that the class has to be a safe space, understanding “safe space” as a place where political or controversial issues are not discussed.

These two positions share the notion that formal education spaces (school, university, institute, high school...) are not appropriate environments to talk about social and political conflicts. And this is a commonly accepted idea. Thus, textbooks reflect this position – let's think that publishing houses seek economic benefit, so their books need to be attractive to have the greatest number of sales possible. This is not an exception for the Spanish classroom. We then find textbooks that are divided around concepts such as food, travel or studies in a very superficial and banal way.

However, this denial – the non-inclusion of conversations around the politics of racism, sexism or other forms of discrimination and oppression –, this decision not to talk about these issues because politics is not discussed in class, is, paradoxically, a political choice. My intervention radically moves away from banalization practices in the Spanish curriculum to think about the notion of reading the curriculum as a hierarchization of the subject's knowledge. Contrary to the idea that textbooks are something "neutral", "aseptic" and "objective", they are oriented, to a greater or lesser degree, to show and encourage a certain pattern of civic behavior; that is, textbooks are a didactic tool, but at the same time they are cultural objects related to the business of the

publishing world and ideological products mediated by different power relations. Following hook's nomenclature, we would say that – generally – textbooks convey values and discourses produced by what she calls white-supremacist capitalist patriarchy (2003, 141). That is why I believe it is necessary to reconstruct counter-narratives that confront those curricula through the visibility of diversity and the different experiences of history and society. To illustrate this point, I would now like to show two examples of materials that I have had to use in the classroom. Starting from hooks and Critical Pedagogy, I first analyze the materials as schooling tools that privilege certain types of oppression. On a second level, I offer ideas for using these materials in a didactic way with attention to diversity and learning Spanish.

Activities' Analysis of activities

The first example is a text about catcalling (see Figure 1).

NOTA CULTURAL • Los piropos

▶ 0:00 / 1:43 🔊

Imagínese la siguiente situación: Varios chicos están reunidos en un lugar público, charlando.¹ De repente, ven pasar un coche descapotable,² último modelo, de una buena empresa³ automovilística. Uno de los chicos exclama: «¡Vaya máquina!». Ahora tenemos una situación similar, pero esta vez los chicos ven pasar a una chica muy guapa y no pueden evitar un comentario: «¡Vaya monumental!». Estos chicos acaban de piropoear a una joven atractiva.

El piropo es una forma de expresión muy hispana que los chicos usan normalmente para halagar a las chicas. Cuando los piropos son alabanzas discretas, cuando tienen gracia⁴ y son inofensivos, pueden ser bien recibidos por las chicas. Por desgracia, las cosas que se dicen no siempre son una manera inocente de coquetear. Es posible que reflejen el mal gusto y la grosería de quien las dice y, por lo tanto, pierden su validez como piropos y pasan a ser algo diferente y desagradable. Cuando esto ocurre, la reacción de la chica será de disgusto y rechazo.

A algunas mujeres hispanas les puede agrandar que las piropoeeen por la calle, siempre que se trate de un verdadero piropo y no de una barbaridad obscena. Es indudable que hasta los piropos más simpáticos implican una coquetería «sensual», pero cuando un chico traspasa los límites permitidos ya no se trata de un sencillo piropo, sino de una agresión que nunca será bien recibida.


Preguntas

1. En grupos de tres, comenten la costumbre de piropoear a las mujeres. ¿Son sexistas los piropos?
2. ¿Piensan que a los hombres les gustaría escuchar piropos sobre su aspecto físico mientras caminan por la calle? Expliquen.

Actividad

C En grupos de tres, lean los siguientes piropos e indiquen cuál es el más cursi, el más romántico, el más poético y el más tonto.

1. Si yo fuera pintor, te haría un retrato y lo llamaría *Perfección*.
2. Estoy celoso hasta de tu **espejo**.
3. ¡Tantas curvas y yo sin frenos!
4. Si mi corazón volara, tu alma sería mi aeropuerto.
5. Estoy buscando diosas para una nueva religión y acabo de elegirte a ti.
6. Jennifer López es una **bruja** junto a ti.
7. Eres mi príncipe y siempre lo serás, y yo tu princesa hasta la eternidad.
8. Quisiera ser gato para vivir siete vidas a tu lado.*



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Figure 1. Exercise on catcalling

After reading the text, students, in groups of three, reflect on whether the compliments are sexist and on the reception of the compliments in the hypothetical case that it was men who received them. Students then have another exercise in which they categorize a series of compliments into the categories of "cheesy," "romantic," "poetic," and "silly." According to the perspective of the text, the compliments that we find here imagine that the sender a man and that the receiver is a woman. Although the students are asked the question of whether the compliments are sexist, the rest of the exercise conceives of the only possibility that this practice is something macho and heteronormative. There is no reflection on the usefulness of the compliment as a sign of the epistemological violence of patriarchy.

On the other hand, this practice is presented as something characteristic of Hispanic countries. The image that is thus created of these cultures is totally linked to misogynist practices that, on the other hand, do not exist only in Hispanic countries.

If the instructor does not pause to reflect on these points in class, even briefly, they will be normalizing images and practices of sexual harassment, and, on the one hand, a retrograde stereotyping of Hispanic cultures. If educators do not critique this text in class, it can legitimize the predatory nature of male-female relationships in the context of white supremacist capitalist patriarchy (hooks 141), thus conveying ideas to students such as sexual abuse is not taken seriously in Hispanic countries Hispanics.

In Spanish the present tense is used to describe actions or situations that *have been* going on *since* a specific point in time or *for* a certain period of time. The patterns are:

present + { desde (*since*) + point in time
 desde hace (*for*) + duration of time

→ Note the corresponding interrogative expressions:

¿Desde cuándo . . . ? *Since when . . . ?*
¿Desde hace cuánto tiempo . . . ? *(For) how long . . . ?*




Figure 2. Exercise on the preposition “from”

Now let's look at a second example (see Figure 2). In the grammar section of another textbook, to teach the use of the preposition "from", the book includes what appears to be an advertisement for the Spanish airline Iberia. The ad includes a map of America, and says “since 1492 no one travels to America as much as we do. Iberia. More than 50 years making friends”. This exercise is a fierce example of how books function as ideological and

political devices. Iberia is a Spanish company, and it says that "since 1492 no one travels to America as much as we do." The ad refers to Iberia, but it seems that, by extension, it is talking about Spain or "we" Spaniards. The exercise represents a discourse of the Spanish colonization as a friendly event ("more than 50 years making friends"). It reproduces an image of colonization as a peaceful process, not as the genocide that it was. By contrast, it hides content about other perspectives, other experiences of colonization, such as those of indigenous peoples, women, transsexuals, etc. The omission and marginalization of these subjects perpetuates a discourse of oppression, submission to values of white supremacy and invisibility of diversity.

There are several points to explore here. I currently work for a Hispanic Service Institution. In her work, the academic activist Gina Ann Garcia is in charge of dismantling the status quo of higher education, analyzing how secondary education aligns with values of the meritocracy characteristic of white discourse. In her book *Becoming Hispanic-Serving Institutions. Opportunities for Colleges and Universities* (2019), García exposes that these institutions that supposedly serve the Hispanic population do not really take into account the need of this demographic sector. The only requirement that an educational center has to be called HSI is that its population be more than 25% Hispanic/Latino/Latinx. Furthermore, there are no requirements for there to be support programs or curricular adaptations that take into account the Hispanic/Latino/Latinx population.

I was born in Cantabria, Spain. I believe it is tremendously problematic that colonization is talked about in class like this, but it is much worse if the educator is also of Spanish origin. I consider it totally unacceptable that a professor of Spanish origin, in the Spanish classroom (language and by extension culture), from a Hispanic Service Institution, communicates and normalizes to students of Latin American origin, a historical narrative about colonization which is based on the invisibility and marginalization of non-white subjects, heterosexuals, women, etc. and that perpetuates discourses of racial oppression and white supremacy. If I, as a Spanish woman, say nothing about this exercise, I am legitimizing that discourse. That entails the delegitimization and silencing of other experiences, counter-hegemonic experiences that some of my Hispanic/Latino/Latinx students may identify with. This can trigger an affective response in students, producing a feeling of rejection and non-inclusion in the classroom. Feelings and emotions should be a component of our work as educators. We cannot build community if we perpetuate exclusion.

In her work, hooks writes about the importance of an engaged pedagogy that focuses on building community in the classroom – both among students, and between students and the educator. I believe that TAs, readers, part-time lecturers or any other type of position that does not have academic freedom to choose pedagogical materials, could take advantage of the opportunities that these types of exercises offer to promote a feeling of community in the classroom.

I believe that educators should develop and implement activities to be used in the Spanish classroom so that we turn these teaching materials into opportunities to promote attention to diversity, educate in a multicultural way, and create spaces for active participation in the class. For example, an activity would be writing a counter-

narrative. In the Iberia exercise: students could write or talk about colonization from a perspective opposite to that of the exercise. For example, from the perspective of indigenous peoples.

An interesting idea from bell hooks is for students to keep a journal and read it to each other. This fosters visibility in the classroom and students' recognition of each other. In our case, the journal could include impressions and receipt of class materials by students. Their emotions, their affective responses...

In many cases, the Spanish class' curriculum includes an oral presentation in front of the class. The topics vary depending on the center and the level, but they give us the opportunity for our students to talk – more or less briefly – about themselves. These types of activities promote the visibility of our students and their cultural diversity, so that we know the heterogeneity of profiles in our class. By creating small spaces for active participation and student recognition, we will encourage the creation of community ties in the classroom, based on tolerance and respect for diversity. At the same time, these activities are very useful in the Spanish classroom, or in the second language learning classroom in general, because they would be done in the target language that students are learning.

In *Principles and Practice in Second Language Acquisition* (1982), linguist Stephen Krashen develops five hypotheses about successfully teaching a foreign language to non-native speakers. His affective filter hypothesis highlights the importance of an atmosphere of motivation, self-confidence, and reduced anxiety in the classroom for acquiring language proficiency. If there is not a climate of community in the classroom, it will be difficult for learners to feel self-confident and have less anxiety over the new language. Critical thinking is crucial for this: we often talk about the importance of students developing their critical thinking, but we cannot teach a value such as critical thinking if we, the educators, do not develop it. As educators we must continually reflect on our prejudices and preferences, as this can have an impact on the way we teach and manage the classroom. For example, if we are used to teaching in predominantly white suburban areas and then start working in a predominantly non-white urban location, we must be able to think about our new students and their values, as well as the new setting, to adapt our teaching – again, to the public and to the space. For example, many of my students are Heritage Speakers who have learned to speak Spanish in a non-formal, non-academic environment – from speaking with their grandparents, for example. If you have not had experience with Heritage Speakers before, the teacher may assume that Heritage Learners have to do well in the class simply because they are of Hispanic descent. Then the mistakes they make seem more serious, since we have high expectations. Good example that teachers also have to review their own biases.

In addition, following Krashen, we must distance ourselves from the idea that the educator is the dominant voice and the privileged figure that transmits knowledge, as this can undermine the student's self-confidence. Students must understand that they can also teach the rest of the class – both the other students and the educator – thus moving from accepting a passive role to understanding the importance of an active disposition in the Spanish class. Many minority and minority groups feel that they have to assimilate into the mainstream society. For example, going back to Heritage Speakers: Heritage Speakers tend to have a negative linguistic attitude towards

their uses of the Spanish language. They may feel intimidated or embarrassed because they don't have as much knowledge of grammar. They feel that their Spanish is broken or that they don't speak well. However, they do not contemplate the cultural and linguistic richness that they have and that they can bring to the classroom; they do not recognize the implication that their own profile has in the classroom or how the Spanish in the classroom can teach them about their linguistic experience. Which brings us to David Ausubel and his notion of “meaningful learning” (1968).

Textbooks and curricula that “omit” controversial topics and reproduce images of white supremacist discourse can give the impression that the content is closed and indisputable. This can produce a perception of the Spanish class as a subject in which the student passively listens to the teacher and memorizes the contents. However, as we know from Ausubel, we must encourage meaningful learning in the classroom. Educators need to create opportunities for students to relate their interests and experiences to the classroom and to critically question classroom materials. If we have in class, for example, a student of Cahuilla origin, like I had a couple of years ago, who is interested in the use of Spanish in his Borrego Spring community, the student could talk about this in his oral presentation or in his journal. We thus encourage their interest, producing meaningful and therefore more efficient learning, but we also give them visibility in the class, creating an opportunity for classmates and the teacher to learn about their cultural diversity.

This brings us to one last point of hooks, which is the importance of the voice. The voice is a crucial concept in his theory, but one that has been misunderstood. Having a voice for hooks does not refer only to the act of telling the experience of each one, but to the strategic use of knowledge from other perspectives, from other experiences. Knowledge of various narratives, multicultural and diverse education, and critical analysis of the curricula, students will be formed as conscientious citizens – let's remember the concept of Freire that hooks later takes up on – , with awareness of different systems of social oppression.

Our students are paying for their education and in general this is a really overwhelming financial outlay, especially for those who are first generation, who come from immigrant families or from the working class, or other types of sectors that are more vulnerable economically. They are investing in their future and a crucial component of being part of society is having visibility and a voice. In my opinion, the classroom should function as a space where students can practice this visibility and their right to speak out and be socially recognized. We have to encourage the creation of a safe space in the classroom, understood as a place to share our differences and learn from them.

We are also in a moment of crisis at various levels. One of them is institutional and democratic: democratic regimes are being attacked and weakened by the rise of ideas from what we could traditionally consider the right and the ultra-right; in short, conservative ideas that reproduce hate speech directed more or less directly at certain sectors of the population that are more vulnerable (socially, politically and historically). The objective of education, according to the authors we have quoted in this paper, is to promote a series of values to coexist in a society collectively in a fair way; live together as democratic citizens. To develop a fair and mature citizenship,

knowledge of our rights, responsibilities, as well as knowledge of the history of our democracy is necessary. But we find ourselves in a moment in which the knowledge of our democratic history is being rejected. I think it is crucial then that, from our work and our position as educators, even with certain limitations regarding curricular planning that TAs, readers, or any other position that cannot select their own materials experience, we promote in the classroom ideas and values of respect, solidarity and diversity.

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Investigation of Studies on Curriculum Fidelity in Turkey

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Abstract: This study aims to examine the studies on curriculum commitment in Turkey. The descriptive content analysis method was used in the research. Google Scholar and YÖK national databases were searched using the keywords "curriculum" and "fidelity." Twenty-four studies using these words in their titles were included in the research. Studies were classified according to the variables of year, language, study type, sample group, method, subject, and analysis techniques used. The results revealed that the number of studies on curriculum commitment had increased significantly in recent years. Most of the studies are in the Turkish language. More studies examine the commitment of secondary and high school teachers to the curriculum. Many of the studies are in the article type, and the number of doctoral studies is limited. The issue of commitment to the curriculum was more associated with personal and professional factors. Curriculum literacy, self-efficacy, curriculum design approach, professional commitment, program orientation, teacher autonomy, philosophy of education, teaching motivation, and learning-teaching process are other issues associated with curriculum commitment. Quantitative methods were used in most studies, and descriptive and univariate analyses were used more. The results revealed a need to increase the number of qualitative studies and diversify the methods used to understand the commitment to the curriculum better.

Keywords: Curriculum fidelity, Descriptive analysis, Curriculum

Citation: Yurt, E. (2023). Investigation of Studies on Curriculum Fidelity in Turkey. In M. Shelley, M. Unal, & S. Turgut (Eds.), *Proceedings of IHSES 2023—International Conference on Humanities, Social and Education Sciences* (pp. 489-500), Denver, CO, USA. ISTES Organization.

Introduction

Curricula are essential in today's education systems, and teachers play a crucial role in implementing these programs. Evaluation of teachers' commitment to programs is essential for the education system's effectiveness. Studies show how much teachers adhere to the programs directly affects student achievement (Fidan, 1986). In addition, the extent to which teachers have implemented the programs can provide a guide for program revision and improvement. In this context, this study examines teachers' commitment to programs and the factors affecting this commitment. The results of this study can make essential contributions to the fields of teacher education and curriculum development. This is crucial because the extent to which teachers provide opportunities for students to be involved in active learning approaches such as peer learning, peer review, and peer assessment are related to the development of students' higher-order competences (see Latifi et al., 2021, 2023; Noroozi et al., 2012, 2018, 2020; Valero-Haro et al., 2019, 2022).

Programs are critical in educating people in a qualified way, developing them socially, providing efficient education, and improving educational activities. It has been suggested that to enhance the effectiveness and efficiency of education, and considerable emphasis should be placed on the phases of planning and programming (Ertürk, 1984). The concept of curriculum, which defines why, what, how, where, when and with whom a job will be done as a pre-designed schedule, is vital for teaching activities in education (Akdoğan & Uşun, 2017).

The curriculum is one of the essential elements in education, and teachers' adherence to this program affects the quality and efficiency of education (Bümen, Çakar, & Yıldız, 2014). How well teachers understand and apply for the program directly affects students' success in their education. Therefore, studying how committed teachers are to their programs can provide essential clues as to how the education system can be improved to increase student achievement.

In addition, training programs may change over time and need to be updated. Therefore, measuring how committed teachers are to their programs can provide a guide for program review. Teachers' commitment to programs is also crucial for teachers' professional development. A thorough understanding and implementation of programs can improve teachers' professional skills and help them explore better teaching methods. Finally, teachers' commitment to the programs is crucial for evaluating the education system. By determining how committed teachers are, this research can identify deficiencies and areas for improvement in the education system.

How successfully the prepared curriculum is applied in the education process is an essential factor affecting the suitability of the curriculum for its purpose. Mr. et al. (2017), program commitment is defined as the similarity between the intended and implemented form of the program. The program's effectiveness relates to teachers' mastery of program objectives, philosophy, prescribed teaching methods and techniques, and teaching experiences (Fullan & Pomfret, 1977). However, many studies have observed that program implementers act differently from the targeted program (Brown & Campione, 1996; Turan-Özpolat & Bay, 2017). Bümen, Çakar, and Yıldız (2014) conducted a study that revealed that Turkish teachers selectively adopted the new curriculum innovations introduced in 2005 based on their individual experiences. To effectively evaluate the curricula, it is crucial to implement them in accordance with their intended programs.

O'Donnell (2008) stated that commitment to the program has five dimensions: adherence, dose/duration, quality of delivery, participant responsiveness, and program differentiation (see Figure 1). Adherence is a collection of program items, events, materials, tools, etc., used effectively. Dose/duration relates to the frequency, number, or duration of program executions. Quality of delivery refers to how the practitioners apply the methods and techniques. The responsiveness of program participants to innovation reflects their perspectives on the events and their inclusion in the program. On the other hand, program differentiation refers to the unique critical features that distinguish the new curriculum from the peer or old programs.

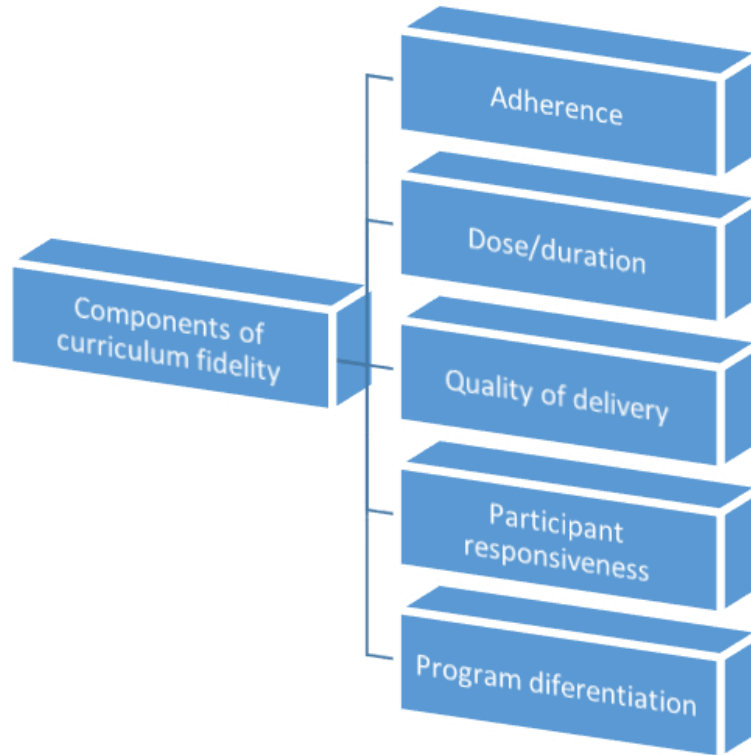


Figure 1. Components of Curriculum Fidelity

Dusenbury et al. (2003) state that if the curriculum is not implemented as planned, it will be challenging to make methodological and theoretical inferences about the essence of the curriculum. Thus, the problems and failures experienced during the implementation phase will be directly attributed to the program. For this reason, studies of curriculum fidelity are essential for information about the program's implementation rate, the application approach, and the change process against the new program. Program commitment is a concept that helps to make healthy decisions about the data and learning products in the implementation process (Carroll et al., 2007). Therefore, commitment to the curriculum can be considered an essential factor affecting the connection and relationship between the variables.

Purpose of the Research

Recently, there has been an increase in the number of studies conducted in Turkey on curriculum fidelity. Researchers examined teachers' commitment to the program from multiple perspectives with quantitative and qualitative approaches. Studies have shown that personal (Aşçı & Yıldırım, 2019; Aslan & Erden, 2020; Burul, 2018) and professional (Arslan Çelik & Gelmez Burakgazi 2021; Gürbüz, 2020; Karakuyu & Oğuz 2021; Yıldız, 2018) characteristics that affect teachers' commitment to the curriculum.

In addition, the relationship between different variables such as curriculum orientation, teaching motivation, curriculum literacy, teacher agency, professional commitment, educational philosophy, self-efficacy, and

curriculum design approach with the curriculum was discussed in studies (Aşçı & Yıldırım, 2019; Aytaç, 2021; Bayraktar, 2019; Boncuk, 2021; Kabaş and Yıldız, 2020; Yılmaz and Kahramanoğlu, 2021). In order to carry out more qualified studies, there is a need to examine the general tendencies of studies examining teachers' commitment to the curriculum.

The results can help understand the factors that affect teachers' commitment to the curriculum. The findings of this study can provide an understanding of what factors affect teachers' program commitment, which may facilitate future researchers' work on this topic. In addition, the obtained results can guide further research on how factors such as teacher characteristics, program characteristics, and teacher-student interaction affect teachers' program commitment. For the study, answers to the following research questions were sought:

- 1- How is the distribution of studies on curriculum fidelity according to years?
- 2- How is the distribution of studies on curriculum fidelity according to the publication language?
- 3- What is the distribution of studies on curriculum fidelity according to the study group?
- 4- How is the distribution of studies on curriculum fidelity according to the type of study?
- 5- How is the distribution of the studies on curriculum fidelity according to the related subjects?
- 6- What is the distribution of studies on curriculum fidelity according to the research method used?
- 7- What is the distribution of studies on curriculum fidelity according to the analysis techniques used?

Method

The descriptive content analysis method was used in the research. This method is expressed as a descriptive evaluation of studies' trends and research results on a particular subject (Çalık & Sözbilir, 2014). By using the descriptive content analysis method, the studies on teachers' commitment to the curriculum were examined and arranged, and the general trend of the studies was determined. Studies were classified according to the variables of year, language, study type, study group, number of samples, method, subject, and analysis techniques used. Google Scholar and YÖK national databases were searched using the keywords "curriculum" and "fidelity." Twenty-four studies using these words in their titles were included in the research. The reviewed studies are marked with * in the references.

Results

This section gives descriptive information about the studies on teachers' commitment to the curriculum in Turkey. Studies on the subject were examined according to the variables of year, publication language, study group, study type, subject to which curriculum fidelity is associated, research method, and analysis techniques.

When Figure 1 is examined, it is understood that research on curriculum commitment started in Turkey in 2014. The number of studies conducted has increased significantly in recent years. Most research was completed in 2021.

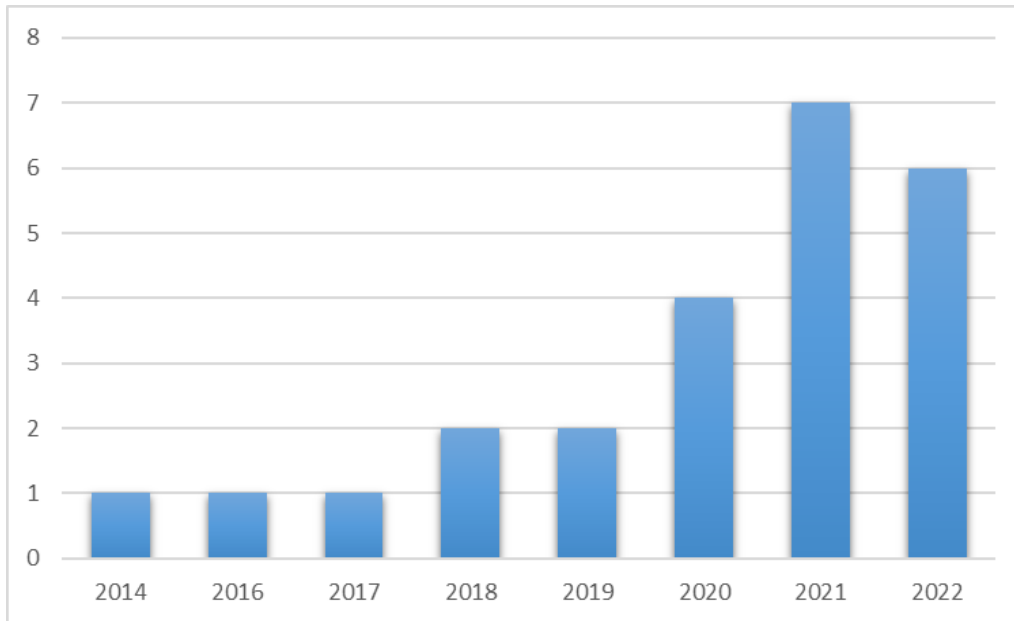


Figure 1. Distribution of Studies by Years

When Figure 2 is examined, it is understood that most studies (88%) on curriculum fidelity were published in Turkish. There are three studies published in English.

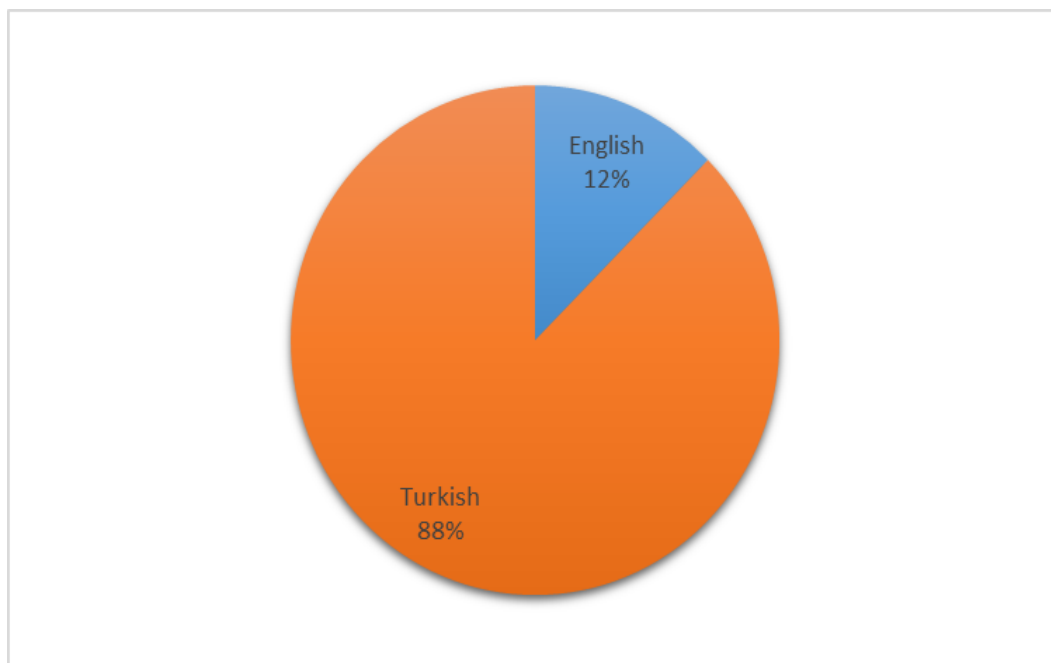


Figure 2. Distribution of Studies by Publication Language

When Figure 3 is examined, it is understood that 21% of the studies on curriculum fidelity were carried out with high school teachers, 17% with secondary school teachers, and 17% with primary school teachers. The rate of studies in which teachers working at different teaching levels were evaluated together is 29%.

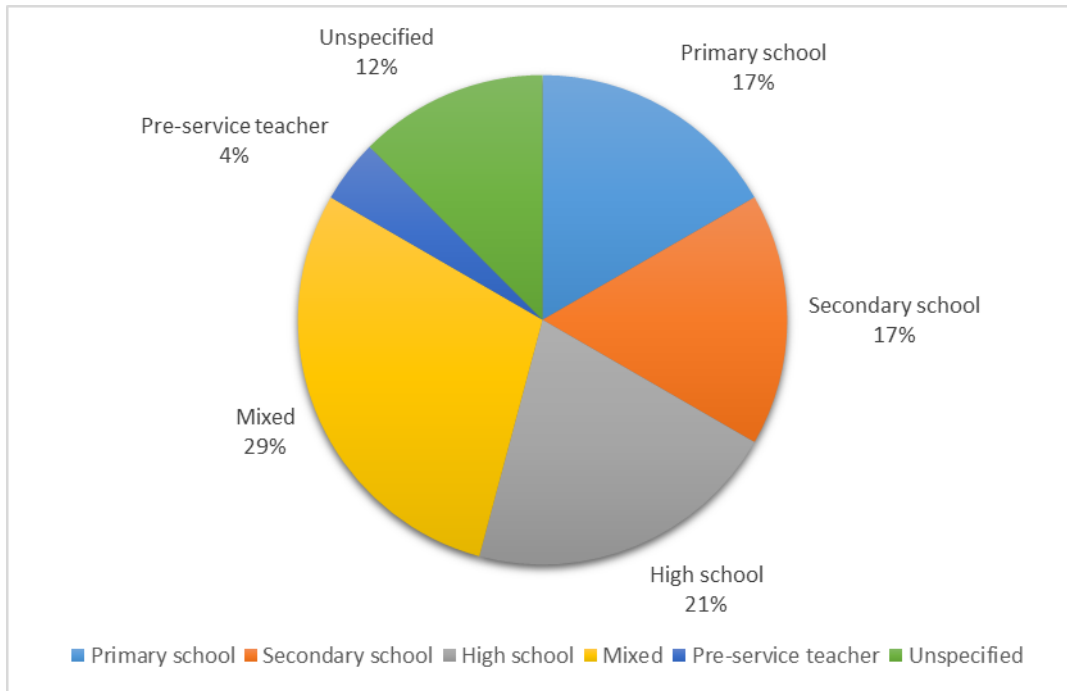


Figure 3. Distribution of Studies by Study Group

Examining Figure 4 reveals that 70.8% of studies on curriculum fidelity were articles, while 29.2% were theses. Most of the articles are of the original research type. A doctoral dissertation on the commitment to the curriculum is completed at the doctoral level.

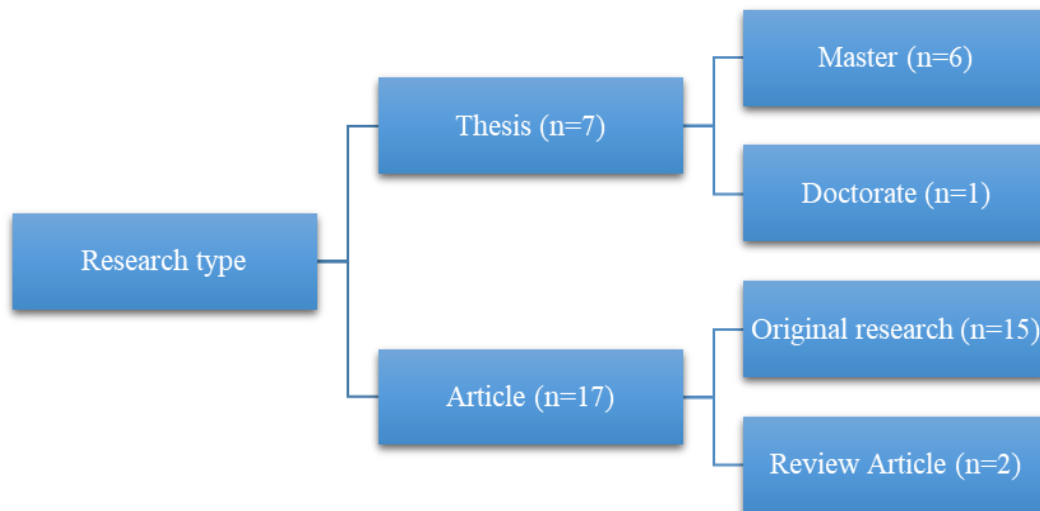


Figure 4. Distribution of Studies by Study Type

Examining Figure 5 reveals that studies on curriculum fidelity often consider commitment in conjunction with personal and professional factors. Other issues associated with curriculum commitment are curriculum literacy, self-efficacy, curriculum design approach, professional commitment, curriculum orientation, teacher autonomy, educational philosophy, teaching motivation, and learning-teaching process competence.

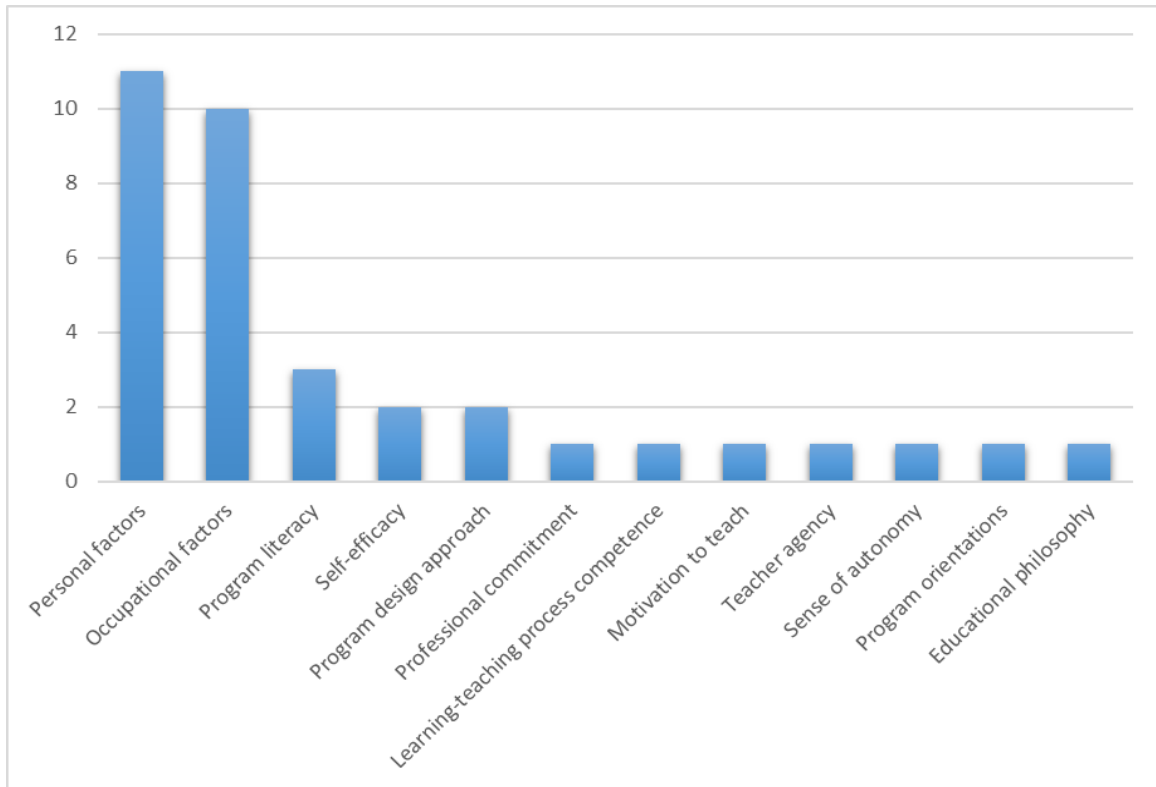


Figure 5. Distribution of Analytical Thinking Skills by Related Subjects

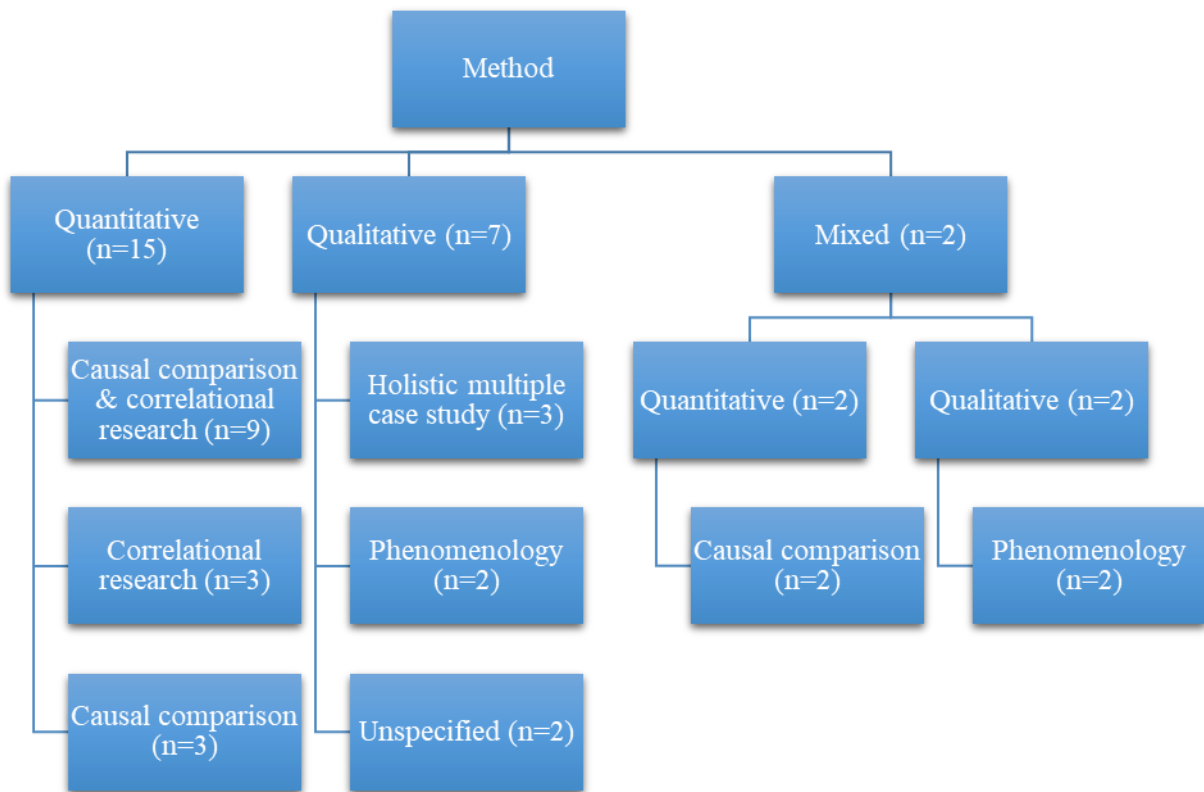


Figure 6. Distribution of Studies by Study Type

When Figure 6 is examined, it is observed that quantitative methods are used in most curriculum fidelity studies. Among the quantitative methods, it was determined that causal comparison and correlational research designs were used more often together. Approximately one-third of the studies were conducted with qualitative research methods. Many of these studies are in the Holistic multiple-case study type—studies in which qualitative and quantitative methods are limited in number.

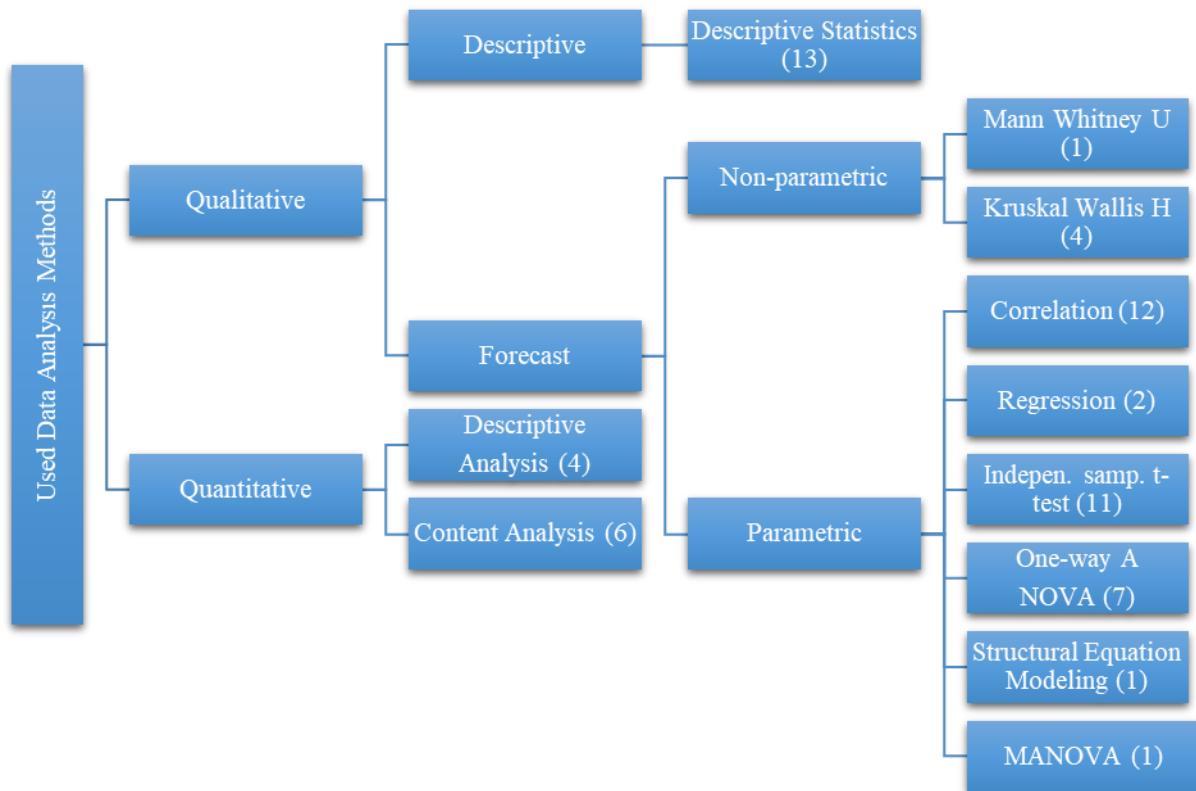


Figure 7. Distribution of Quantitative Analysis Techniques Used in Studies

When Figure 7 is examined, it is observed that descriptive and parametric analyzes are used more in quantitative studies on curriculum committees. Descriptive analyzes were used to determine the level of commitment to the curriculum. Correlation analysis, on the other hand, was used to identify the factors associated with curriculum fidelity. The number of studies using multivariate analyzes such as MANOVA and structural equation model analysis is limited. In qualitative studies, it was observed that descriptive and content analysis methods were used.

Conclusion and Recommendations

This research presented a descriptive analysis of studies on teacher commitment to the curriculum in Turkey. According to the research results, research on teachers' commitment to the curriculum started in 2014 and has increased significantly in recent years. Most of these studies were published in Turkish. There are studies in which teachers working at different teaching levels, including high school, secondary school, and primary

school teachers, are evaluated together.

In addition, it was seen that most of the studies on curriculum fidelity were in the type of articles, and quantitative methods were used. It has been observed that curriculum fidelity is more often considered together with personal and professional factors. The study identified several factors associated with a solid commitment to the program, including understanding the curriculum, self-efficacy, curriculum design approach, professional dedication, curriculum orientation, teacher autonomy, educational philosophy, teaching motivation, and competence in the learning-teaching process. In order to better understand teachers' commitment to the curriculum, studies that aim to examine the relationships between variables such as school climate, leadership style, collective efficacy perception, academic optimism, and curriculum fidelity are needed.

Most of the studies used causal comparison and correlational research designs from quantitative designs. It has been observed that studies using quantitative methods mostly contain descriptive and parametric analyzes. Descriptive analyzes were used to determine the level of commitment to the curriculum. Correlation analysis, on the other hand, was preferred to determine the factors associated with curriculum fidelity. The number of studies using multivariate analysis is limited, and the number of studies using advanced analysis such as MANOVA and structural equation model analysis is limited. The number of qualitative and mixed-pattern studies is less. It is stated that direct observation is the most accurate due diligence approach since self-reported reports lead to inflated judgments about the level of performance (Vartuli & Rohs, 2009). In this direction, increasing the number of qualitative studies and diversifying the methods used can be recommended.

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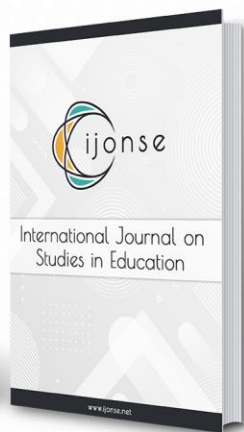
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