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An Examination of the Flipped Classroom Paradigm for Diverse Student Populations

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Abstract: This manuscript reports the results of two pilot studies that investigated the views of international cohorts of teacher educators regarding the efficacy of the flipped classroom paradigm in K-12 schools. A void in the literature addressed by each pilot study was the relevance of flipped classrooms to student subgroups requiring specialized instruction (e.g., students with disabilities). In the first study 107 teacher educators (58% response rate) from 38 countries completed a 12-item survey designed to determine their views on the efficacy of flipped classrooms. Respondents reported flipped classrooms are efficacious for elementary and secondary students, as well as those who are culturally and linguistically diverse – particularly with respect to teaching complex subjects (e.g., science). Conversely, respondents reported the paradigm is inappropriate for students with disabilities, and that noteworthy barriers (e.g., a digital divide) impede its use with students in impoverished rural communities. In the second study 104 teacher educators (61% response rate) from 33 countries completed a 10-item survey designed to determine their views about the appropriateness of the flipped classroom paradigm for students with learning and/or behavioral challenges. Both studies are a measure of the paradigm's face validity, particularly with respect to certain student subgroups.

Keywords: Flipped classroom, Diverse learners, Teacher Education, Culturally and linguistically diverse learners

Introduction

The flipped classroom paradigm refers to a protocol which has students complete activities at home for the purpose of learning new content followed by engagement in related application activities the next day at school. The activities completed at home involve tasks that have been traditionally completed during class time at school. Examples include students watching their teacher's lecture, completing assigned readings, or engaging with material online.

The application activities completed the next day at school, under a teacher's direction, would be tasks that typically have been assigned as homework (Findlay-Thompson & Mombourquette, 2014; McLean et al., 2016). The flipped classroom is a relatively new phenomenon whose origin has been traced to schools of nursing and engineering in higher education (Moore, 2016). Subsequently its use has been adopted by K-12 schools, and has spread internationally (Bishop & Verleger, 2013).

Most research about flipped classrooms has examined them in comparison to a traditional classroom model, focusing specifically on comparative learning outcomes and the preferences for one model or the other by key constituencies (DeSantis et al., 2015; Goodwin & Miller, 2013; McLean et al., 2016). Regarding comparative learning outcomes, mixed results have been reported across studies, with a few recent meta-analyses concluding that slightly better learning outcomes were realized with a flipped classroom model (Lag & Saele, 2019; Lo & Hew, 2017). Studies reporting student, staff, and parental preference data also have reported mixed results, including greater student satisfaction (Goodwin & Miller, 2013), a reduction in parental complaints (Green, 2012), and reports from teachers that they are able to focus on effective teaching strategies during class time (Bergmann & Sams, 2014) being associated with flipped classrooms. Yet, lower student satisfaction in classrooms that used flipped techniques as compared to those that used traditional techniques, has also been reported (DeSantis et al., 2015).

Considerations of these studies reveal two particular aspects warranting further research. One aspect is the characteristics of the students studied. With respect to students in higher education, reportedly most analyses of comparative learning outcomes in higher education have involved students in schools of medicine/healthcare (e.g., Gillette et al, 2018; Tan et al., 2017) and business schools (Jacbosen & Knetemann, 2017). Arguably, these students could be characterized as both highly capable and motivated (Bishop & Veleger, 2013), and who have ready access to technology equipment and online infrastructure. Thus, the characteristics of the samples of students studied calls into question the extent to which the results apply to a more diverse general student population – both in higher education and K-12 schools.

Regarding studies of K-12 students – which are far fewer in number – the studies have focused mostly on students in high school rather than elementary school. Furthermore, the data reported have not been disaggregated with respect to certain K-12 subgroups that have been the focus of other differential analyses of educational initiatives (Lo & Hew, 2017). Specifically, the K-12 flipped classroom studies have not disaggregated the data in terms of subgroups that exemplify the diversity in these schools, such as students who are culturally and linguistically diverse, manifest disabilities, or reside in impoverished rural communities.

A second aspect of the investigations of flipped classrooms that sets the occasion for further research is their sole reliance on outcome measures. The use of outcome measures results in questioning, through a retrospective approach, the reasons why favorable or unfavorable results were attained/realized. That is to say, studies of comparative learning outcomes are left asking why positive, negative, or no difference outcomes were realized.

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An alternative, viable approach to investigating the utility of flipped classroom techniques would be one that is proactive, consisting of the identification of concerns about the use of flipped classroom techniques with certain subgroups of students - followed by the development of interventions intended to make the approach appropriate for these students, which would then the focus of a study. That is to say, even without the reporting of negative, disaggregated comparative learning outcome data, there may be pre-existing concerns about the appropriateness of the flipped classroom paradigm for certain subgroups. If these concerns were identified before the implementation of a flipped classroom paradigm, they might allow for the design of a flipped classroom model that would address them so that optimal learning outcomes would be realized (or at least these students would be accounted for).

The remainder of this manuscript reports on two pilot studies that were designed to solicit the views of separate international cohorts of teacher educators about the efficacy of flipped classroom techniques for select K-12 student subgroups: culturally and linguistically diverse students, students with disabilities, and students who live in impoverished rural communities. After reporting about the studies, the manuscript discusses the implications of the results with respect to the use of flipped classroom techniques with one subgroup: culturally and linguistically diverse students.

Method

Survey Distribution and Data Analysis

Two pilot studies were designed to solicit the views of international cohorts of teacher educators about the efficacy/utility of flipped classroom techniques for K-12 students. The respondents were randomly selected professionals who – in the previous year – had presented at an international conference that focused on research in education, and to others who served on an editorial board of several journals involved in empirical research in the field of teacher education. The response rate for Study 1's survey was 58% (107 out 185) while the response rate for Study 2's survey was 61% (107 out of 170).

In each study the specific survey items were designed for the purpose of soliciting information pertaining to a unique set of research questions posed. However, a similar protocol was followed to design and distribute both sets of surveys, as well as tabulate the results (Appendices A and B present the surveys and respondent data). Altogether, the surveys were designed to provide for an examination of a snapshot of current worldwide views and practices of those involved in teacher education from various countries with respect to the flipped classroom model, rather than provide a scientific random sample for analysis.

In other words, from the outset the surveys were set to be non-scientific, non-representative snapshots. As can be seen in tables 1-4, the number of responses by country is small. As a result, a statistical analysis of the data would not yield particularly valid or useful information. Instead, an analysis of the frequency of response to each item allows for some tentative conclusions and points to some possibilities for future research.

Table 1. Survey 1: List of Countries with Highest Numbers of Respondents

Country	Number of Respondents
Australia	5
China	9
Germany	4
Hong Kong	4
Israel	4
New Zealand	4
United Kingdom	5
Spain	4
Taiwan	6
United States	7
Total = 10	52

Table 2. Survey 1: List of Countries with 1-3 Respondents

Country	Number of Respondents
Brazil	3
Catalonia	1
Canada	3
Chile	2
Columbia	1
Denmark	1
Finland	3
France	1
Ghana	2
Ireland	2
Italy	1
Jamaica	1
Japan	3
Kuwait	2
Mexico	3
Netherlands	2
Philippines	2
Poland	1
Russia	3
Saudi Arabia	2
Singapore	1
South Africa	3
South Korea	3
Sweden	2
Tanzania	1
Thailand	1
Turkey	3
Vietnam	2
Total = 28	55

Table 3. Survey 2: Number of Respondents by Country with the Most Participants

Country	Number of Participants
Australia	6
Brazil	4
China	7
Hong Kong	5
Israel	5
Jamaica	4
New Zealand	5
Russia	4
United Kingdom	7
South Korea	4
Taiwan	7
United States	4
Total = 12	62

Table 4. Survey 2: Number of Respondents by Country with the Least Participants

Country	Number of Participants
Argentina	1
Canada	2
Chile	2
Columbia	1
Denmark	1
Germany	3
Ghana	2
Guyana	3
Italy	2
Kuwait	3
Netherlands	2
New Guinea	1
Philippines	1
Poland	1
Singapore	2
South Africa	3
Sweden	2
Tanzania	3
Thailand	1
Turkey	3
Vietnam	3
Total = 21	42

With respect to tabulating the results, only the total number of responses per question were reported. Some questions allowed for multiple responses so, in some cases, the responses exceeded the number of respondents.

Survey Design and Content

Each survey's items were designed by one of this manuscript's authors, and were intended to reflect many of the findings and issues identified in previous studies, particularly those by DeLozier and Rhodes (2017), Habib et al. (2018), and Lo and Hew (2017). Draft items were developed and then reviewed by fellow university faculty for content, question clarity, and possible answers. Afterwards, the items were distributed to the international cohorts of teacher educators described previously.

A key feature of each survey was the inclusion of questions pertaining to student subgroups. These questions enabled both pilot studies to address an existing void in the flipped classroom research, which is the lack of disaggregated data pertaining to the impact of flipped classroom techniques on the performance of diverse student groups.

Appendix A consists of the 12-item survey from Study 1, which was designed to address general issues that included (a) the mixed results reported in previous studies about comparative learning outcomes and preferences for the flipped classroom paradigm, (b) concerns about the quality of some of the research/calls for more research (Delozier & Rhodes, 2017; Roteller & Cain, 2016), and (c) the lack of disaggregated data with respect to noteworthy K-12 student subgroups. Consequently, Study 1 was conducted for the purposes of addressing these concerns and to provide preliminary, foundational data to be used for more focused and extensive research.

The research questions posed were as follows:

1. Is there a consensus in the international professional community that the flipped classroom improves public school student learning and understanding of content?
2. What cautions and concerns exist in the international professional community in the use of the flipped classroom with students who are culturally and linguistically diverse, manifest disabilities, and/or reside in impoverished rural communities?

Appendix B presents the 10-item survey from Study 2. Study 2 focused on flipped classroom techniques with students with learning and behavioral challenges. The study addressed the respondents' beliefs (a) about the impact of flipped classrooms on teachers' workloads, (b) whether students with learning and behavioral challenges would be likely to complete home-based tasks for the purpose of learning new content, (c) the teacher educators' knowledge and training about flipped classrooms and how to meet the instructional needs of students with learning and behavioral challenges, and (d) the teacher educators' roles in preparing either general or special educators.

The research questions posed were as follows:

3. Do teacher educators believe that the flipped classroom is associated with increased teacher work?

4. Do teacher educators believe that students with disabilities derive additional benefits from the flipped classroom when compared to the traditional classroom?

5. Are teacher educators adequately prepared in the use of the flipped classroom to meet the instructional needs of students with serious learning and/or behavioral challenges?

Results and Discussion

Study 1 Results

In response to survey items 2-4 the majority of respondents indicated that their role as a teacher educator tasked them to prepare both elementary and secondary education teachers and that they had some or a great deal of knowledge about flipped classrooms as well as some or a great deal of experience in using or observing flipped classrooms. Responses to items 5-7 indicate the respondents' beliefs that most students prefer a combination of flipped and traditional classroom approaches, and that flipped and traditional classrooms are equally effective in improving the learning of elementary and secondary students.

In response to item 8, a slight majority of respondents reported that a flipped classroom would create a more effective learning environment than a traditional classroom for culturally and linguistically diverse students, whereas two-thirds of respondents reported that a flipped classroom does not create a more effective learning environment than a traditional classroom for students with disabilities. In a subsequent interview, a select group of respondents expressed similar concerns about flipped classrooms not creating a more effective learning environment than a traditional classroom with respect to students living in impoverished rural communities and cited reasons for their response that included limited access to technology items as well as concerns about internet connectivity and unreliable electricity (i.e., a digital divide/digital divide issues).

In response to item 9, respondents noted the biggest strength of flipped classrooms was that they were a better way to teach complex subjects and for item 12, those respondents who reported flipped techniques as being a more effective way of teaching subject area knowledge to elementary and secondary general education students identified science and social studies as the subject areas most conducive for using flipped techniques. However, it is important to note that in response to item 11, the majority of respondents reported that flipped classroom techniques were not a more effective way of teaching subject area knowledge to these students.

Study 1 Discussion

The fact that the majority of teacher educators were tasked to prepare both elementary and secondary teachers, and the respondents had a great deal or some knowledge about, and experience with using, flipped classrooms, adds to the validity of the findings. Like previous studies, mixed results were reported with respect to student preferences for flipped or traditional classrooms and these classrooms' comparative effects on improving learning.

The teacher educators' belief in the equal effectiveness of both traditional and flipped classrooms emphasizes a measured approach to school reform. That is to say, it appears these teacher educators see the flipped classroom as an avenue for school reform that builds upon what is working rather than as a wholesale replacement for a completely inept system.

Consideration of the respondents' mixed beliefs about the appropriateness of flipped classrooms for certain subgroups, as well as the strengths and weaknesses of flipped classroom techniques and which content areas are more suited to the techniques, raises two areas for investigation. One area is a need to identify the "feature match" between the types of students, flipped classroom techniques, and subject matter content that results in effective instruction. A second area is the identification of validated reasons why flipped classrooms turn out to be more appropriate for certain student subgroups (i.e., culturally and linguistically diverse) and not others (i.e., students with disabilities).

Study 2 Results

In response to items 1-3 the majority of respondents believed that flipped classroom techniques require more teacher instructional preparation but no more effort in grading student work or monitoring their performance. For items 4-6, the overwhelming majority of respondents believed that students with learning disabilities, serious emotional disturbance, and students who have serious academic deficits would not be likely to complete reading and instructional assignments at home. Yet, in response to item 7, nearly an equal number of respondents believed that there would be no difference between students with disabilities and their typically developing peers with respect to completing these tasks.

Items 8 and 9 addressed the qualifications of the respondents in terms of their training or knowledge on the use of flipped classroom techniques and how to meet the instructional needs of students with disabilities or serious academic deficits. The majority of respondents reported they had little or no training or knowledge of flipped classroom techniques whereas a majority of respondents indicated they had a great deal or some training or knowledge in how to meet the instructional needs of students with disabilities or serious academic deficits. Finally, the teacher educators reported that they were evenly split in terms of their primary instructional assignment regarding whether it was to train prospective special education teachers or general education teachers.

Study 2 Discussion

Responses to items 1-3 indicate that in instances in which flipped classroom techniques did not result in better comparative learning outcomes the flipped classroom model would be less efficient than a traditional model because teachers would be required to exert more effort without experiencing resulting improved student learning outcomes. Furthermore, respondents are clearly concerned about students not completing tasks at home. This

concern applied to students with disabilities, students exhibiting serious academic deficits that were not necessarily attributed to a disability, and typically developing peers.

This raises several questions regarding the practical implementation of flipped classroom techniques. One question is how would class proceed the next day. A practical implementation issue would be how schools would be structured to address students who come to school having completed assigned home-based tasks and students who had not. This circumstance might result in a bifurcated educational system that runs counter to efforts over the past 30 years to include all students in the general education classroom. A second question is what interventions could be employed to increase the probability home-based tasks would be completed.

Educators would have to differentiate which situations involve a "can't do" reason for not completing assignments and which involve a "won't do reason." Students with disabilities and serious academic deficits may not complete the assigned readings because they cannot due to low reading ability. The reason their typically developing peers may not complete the assignments is simply because they choose not to. Different interventions would be proper for these different circumstances.

It seems a representative sample of teacher educators preparing both general and special education teachers were included in the study, and that they were trained and knowledgeable about teaching students with disabilities. Yet, the exact opposite could be said regarding flipped classroom techniques. This calls into question the extent of the validity of the findings as well as a number of teacher education issues.

One is whether teacher educators would even broach this topic with their preservice teachers. Given that some evidence indicates teacher educators rely heavily on their personal experiences and beliefs (more so than published evidence) when deciding what to teach, it is fair to question whether their lack of belief in the bona fide implementation – and perhaps resulting efficacy - of flipped classroom techniques for students with disabilities would result in them not even addressing this topic in their preservice teacher education coursework. This outcome might be buttressed by these teacher educators' being challenged to figure out how to apply what they know about educating students with disabilities to a new (for them) flipped classroom paradigm.

Conclusion

The surveys report mixed results in that the flipped classroom was identified as being effective for some students whereas the traditional classroom was identified as being effective for others. Likewise, with respect to certain subgroups, flipped classroom techniques were reported to be effective for some and not others. Based on this data, future research should explore reasons why the flipped classroom is perceived to be appropriate or not appropriate. Afterwards, interventions could be developed for addressing either set of perceptions and then studied to assess their impact. The discussion that follows about culturally and linguistically diverse students serves as an example of how this tactic could proceed.

Implications for Student Subgroups: Culturally and Linguistically Diverse (CLD) Students

The flipped classroom paradigm is a relatively new method of instruction. This model of teaching involves a reverse of the teaching process that allows learners to rely on their own skills to evaluate and learn new information prior to attending class where the teacher devotes the majority of the time to application and practice. Although benefits of this model have been documented in various studies (see Alsowat, 2016; Du et al., 2014; Santikarn & Wichadee, 2018), it is not without its challenges for subgroups of learners who are culturally and linguistically diverse (CLD) (Turan & Akdag-Cimen, 2019). This paradigm can be effective with independent learners who have the skills needed to maneuver through new information, however, many CLD students require assistance with the new language that they may still be learning, therefore, prohibiting their ability to maneuver through new information on their own. This is simply due to the fact that learning a new language is a lengthy process that requires a great deal of time and practice. Knowing as much as possible about the students is key as individual characteristics of the learners must be taken into consideration (Chuang, Weng, & Chen, 2018).

The greatest advantage of the flipped classroom for CLD students is that the learners are able to review new materials at their own pace. Learners are able to rewind and re-watch new information which allows them to look up new words in the dictionary or if they were not able to comprehend information due to the fast pace of the speaker. These are important benefits for CLD students who often feel that they get left behind due to their ongoing language learning process or their lack of familiarity with information that require knowledge of a cultural concept with which they may not be familiar.

Recommendations

In the age of COVID-19 and the post-pandemic era, it seems like hybrid formats of teaching and learning are here to stay. If a flipped classroom paradigm or a version of a hybrid teaching model is used in inclusion classrooms, teachers must become aware of the various needs of diverse learners including exceptional students and culturally and linguistically diverse learners. Additional studies and evaluations of the effectiveness of such models with diverse learners is needed and the inclusion of such teaching paradigm must be considered within methods courses designed for teacher education programs.

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Appendix A. Survey of an International Cohort of Teacher Educators' Views Regarding the Efficacy of Flipped Classrooms

1. In what country do you work? Responses are represented in tables 1 and 2.

2. Are you involved with the education of teachers in: Number of Responses

A. Elementary	24
B. Secondary	25
C. Elementary/Secondary	57

3. How would you rate your knowledge of the 'flipped' classroom?

A. Great deal of knowledge	35
B. Some knowledge	41
C. Little knowledge	17
D. No knowledge	12

4. How much experience do you have in using or observing the use of 'flipped' techniques in school classrooms?

A. A great deal of experience	24
B. Some experience	44
C. Little experience	27
D. No experience	10

5. In your experience, most students prefer?

A The traditional classroom	25
B. The flipped classroom	29
C. A combination of 'flipped' and traditional approaches	53

6. In your opinion, which format is generally most effective in improving learning in elementary students?

A Traditional techniques are more effective than 'flipped' techniques	23
B. 'Flipped' techniques are more effective than traditional techniques	33
C. Traditional and 'flipped' techniques are equally effective	51

7. In your opinion, which format is generally most effective in improving learning in secondary students?

Number of Responses

    A Traditional techniques are more effective than 'flipped' techniques   28

    B. 'Flipped' techniques are more effective than traditional techniques   33

    C. Traditional and 'flipped' techniques are equally effective   46

8. In your opinion, does the 'flipped' classroom create a more effective learning environment than the traditional classroom for content area teaching of students who are culturally and linguistically diverse and students with special needs? Mark all that apply

    A. Yes, for learners who are culturally and linguistically diverse   56

    B. No, for learners who are culturally and linguistically diverse   49

    C. Yes, for students with special needs   37

    D. No, for students with special needs   70

9. In your opinion, what is the biggest strength of the 'flipped' classroom? Mark all that apply

    A. Prior activities and reading enhance in class activities   47

    B. Increases teamwork skills   19

    C. Better opportunity to apply knowledge   47

    D. Better way to teach complex subjects   62

10. In your opinion, what is the biggest weakness of the 'flipped' classroom? Mark all that apply

    A. Students not watching the videos or reading the material before class   54

    B. Videos and activities that are not related to the focus of the lesson   33

    C. Access to video technology at home is not known   30

    D. Teacher time spent filming or making videos   48

11. In your opinion, with general education elementary and secondary students, are 'flipped' techniques a more effective way of teaching subject area knowledge than traditional techniques?

    A. Yes   47

    B. No   59

12. If your answer to the previous question was 'Yes" then which subject areas are most conducive for using 'flipped' instructional techniques?

Number of Responses

Mark all that apply.

	Number of Responses
A Math	19
B. Science	39
C. Reading	14
D. Language Arts	16
E. Social Studies	33

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Appendix B. Survey of Teacher Trainers' Opinions About the use of the Flipped Classroom with K-12 Students who have Serious Learning and/or Behavioral Challenges

(Survey questions and percentage of responses for each question: N=104)

1. Do "flipped" classroom instructional techniques require more work from the teacher than traditional instructional techniques in terms of preparation of instruction?

    A. Yes - 67%

    B. No - 33%

2. Do "flipped" classroom instructional techniques require more work from the teacher than traditional instructional techniques in terms of grading?

    A. Yes - 26%

    B. No – 77%

3. Do "flipped" classroom instructional techniques require more work from the teacher than traditional instructional techniques in terms of monitoring student performance?

    A. Yes - 27%

    B. No - 73%

4. In your opinion, how likely is it that a majority of students who are learning disabled will complete reading and instructional assignments prior to a class meeting?

    A. Very likely - 32%

    B. Not very likely - 68%

5. In your opinion, how likely is it that a majority of students who have serious emotional and behavior problems will complete reading and instructional assignments prior to a class meeting?

    A. Very likely - 19%

    B. Not very likely - 81%

6. In your opinion, how likely is it that a majority of students who have serious academic deficits will complete reading and instructional assignments prior to a class meeting?

    A. Very likely - 9%

    B. Not very likely - 91%

7. In your opinion, which of these statements is most true:

    A. A majority of children with special needs are more likely than their more normal peers to NOT complete reading and instructional assignments prior to a class meeting? - 44%

    B. A majority of children with special needs are more likely than their more normal peers to complete reading and instructional assignments prior to a class meeting? - 13%

    C. There is no difference between the percentage of children with special needs and their more normal peers in completing reading and instructional assignments prior to a class meeting? - 42%

8. In your opinion, how much training or knowledge do teacher education faculty members in your institution have in using "flipped " classroom instructional techniques?

    A. A great deal of training or knowledge - 10%

    B. Some training or knowledge - 33%

    C. Little training or knowledge - 26%

    D. No training or knowledge - 31%

9. In your opinion, how much training or knowledge do teacher education faculty members in your institution have in meeting the instructional needs of children with severe academic deficits or special needs?

    A. A great deal of training or knowledge - 13%

    B. Some training or knowledge - 46%

    C. Little training or knowledge - 30%

    D. No training or knowledge - 10%

10. What is your primary assignment in the teaching of teacher education classes?

    A.   Special Education - 26%

    B.   General Education - 47%

    C.   Equally Split between general and special education – 27%

The Perception of the College Experience for Students with ADHD

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Abstract: Students diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) are impacted by ADHD in their academic pursuits in higher education. This study aimed to investigate, explore, understand, and offer a voice to the students directly affected by ADHD. The framework for the research was based on Ryan and Deci's (2000) Theory of Self-determination. Semi-structured interviews were conducted with eight students currently enrolled at Northeastern University pursuing an undergraduate degree who disclosed to the Disabilities Resource Center that they had been diagnosed with ADHD. The data were analyzed using Interpretative Phenomenological Analysis. Findings include early diagnosis and identification as an essential factor in an individual's growth and academic success and the influence of their support systems on their self-awareness and self-confidence. Also, balancing both internal and external motivation for college students with ADHD was essential to their well-being and effectiveness in a college setting. With little research conducted on college students with ADHD, this research provides the potential for further research to enhance faculty preparation and address conditions or disorders.

Keywords: Special education, College students, Higher education Special education, ADHD with higher education

Introduction

ADHD is a neurological disorder with different clinical indicators, such as lack of attention, hyperactivity, and impulsivity (Swartz et al., 2005). Prior knowledge has shown that learners with ADHD commonly register academic underachievement. Compared with their age mates without ADHD, they are also not likely to complete high school (Barkley et al., 2000; Young et al., 2003). A considerable number of school-aged children continue to be diagnosed with ADHD compared to the past. More children will join higher education institutions soon (Daley & Birchwood, 2010). By understanding the importance of ADHD and how it impacts children at the high school level, college administrators need to be better prepared to help students transition into college life. Thus, the phenomenological research explored how college learners with Attention Deficit Hyperactivity Disorder (ADHD) are affected during their higher education pursuit at Northeastern University.

The researcher aimed to understand college learners' experience by identifying support services for learners diagnosed with ADHD. Support services help the students develop the cognitive, social, and behavioral skills necessary for successful college-level learning outcomes. The research study adopted a phenomenology design as

the ultimate methodological framework to explore the experience of being a college student with ADHD. The Interpretative Phenomenological Analysis (IPA) aimed to present an understanding of persons with and without ADHD.

Further, the present study responded to the problem of practice across colleges and other higher learning institutions. They continue to enroll learners with ADHD without a clear understanding of how these students experience and construct meaning from the various environmental contexts. This limitation calls for more education about this population so that higher education institutions can provide more resources to aid those students who suffer from this disorder. The study will also provide insights to educators within the higher learning sector on effectively accommodating and promoting learners' success with this particular condition.

ADHD is one of the primarily diagnosed disorders in children (American Psychiatric Association, 2013). Nevertheless, most educators are not skilled and do not understand how to handle this particular disorder's implications within the classrooms (American Psychiatric Association, 2013). For most students, this disorder requires unique accommodations. It is thus necessary to offer support services to retain them in schools. In most situations, learners diagnosed with ADHD do not have ready access to the resources at the college level.

Similarly, those learners who have chosen not to disclose their diagnosis do not have access to appropriate services. According to the American Disabilities Act, all students at the college level who have been clinically diagnosed with ADHD are supposed to be provided with suitable accommodations. The overall need for services to support college learners with this disorder has risen. However, there is still a need to offer ideal learning tools for college educators to succeed with these unique learners (Lee et al., 2008).

Individuals with ADHD have the likelihood to witness stigmatization, discrimination, and prejudice. As earlier mentioned, this particular disorder considerably impacts learners' academic, social, and behavioral functioning within schools. Despite what is known about ADHD, its impact on college students needs more research. The researcher aimed to present an interpretation of lived experiences of learners currently attending college to inform continuous coming up with strategies for improving the needed services to this unique population and, at the same time, guarantee both their academic and life success. The study aimed to discover and close existing gaps and contribute answers to create new questions that can be explored in future research work (Alvesson & Sandberg, 2011; Vanderlinde & van Braak, 2010).

Research Question

The study investigated and explored and offered a voice to the people directly affected by ADHD. The study also aimed to reveal how learners with ADHD viewed their experiences by measuring support services at the college level. Hence, the research question of this particular study is: How do undergraduate college students, who are working through the Disabilities Resource Center, based on a diagnosis of ADHD, perceive their college

experiences with student support services such as particular strategies, technology, or accommodations that are particularly helpful for their learning experience?

Participants

With Disability Resource Center (DRC) help at Northeastern University, the researcher recruited 35 potential participants to gain deeper insights into the lived experiences of college students diagnosed with attention deficit hyperactivity disorder (ADHD). Once potential participants were obtained, a follow-up email was sent to collect preliminary information regarding the student's demographics and educational pursuits. Upon receiving the initial information, participants were contacted for interviews. The final cohort included eight participants, three males, and five females, with interviews spanning eight weeks. Each of the study's participants attended Northeastern University; seven of the participants were located on the university's Boston campus. One was located on the university's regional campus in Charlotte, North Carolina. Each college at Northeastern University was represented, except for the College of Professional Studies. The University's Bouve College of Health Sciences was represented twice, as one participant was in Boston and another was in Charlotte. Participants' diverse locations helped gain knowledge about how ADHD is perceived and addressed across the university's regional campuses.

Table 1 provides a brief demographic overview of the students who volunteered to participate in this study. Listed alphabetically by the participant's pseudonym, the table also includes participants' program of study, GPA, the college they attended, and their disclosed disabilities.

Table 1. Participant Demographics

First Name	GPA	Classification	College**	Race/Ethnicity	Gender	Disability
P1	3.204	Sophomore	1	White	F	ADHD/Dyslexia
P2	3.854	Junior	4	White	M	ADHD/Dyslexia Stuttering/Synesthesia
P3	3.667	Sophomore	5	Indian	F	ADHD/BiPolar
P4	3.400	Senior	2	White	F	ADHD
P5	3.768	Junior	3	White	F	ADHD/Dyslexia
P6	3.500	Senior	1	White	F	ADHD/Dyslexia
P7	3.465	Junior	6	White	M	ADHD/Dyslexia
P8	2.882	Freshman	7	White	M	ADHD/Dyslexia

** 1 = Bouve College of Health Sciences, 2 = College of Arts, Media Design, 3 = College of Social Science & Humanities, 4 = College of Engineering, 5 = College of Science, 6 = D'Amore-McKim School of Business, 7 = Khoury College of Computer Sciences

Method

The research study's theoretical framework will focus on the Self-Determination Theory (SDT) to serve as the research project's main lens. The self-determination theory framework will align with the research questions to better understand how learners diagnosed with ADHD perceive support services offered by higher educational institutions in which they are enrolled.

The SDT was proposed by Edward Deci and Richard M. Ryan about 40 years ago. Since then, the theory has proven to be "a major theory of human motivation" (Gagne & Deci, 2014, p. 1). The model is adopted to provide an understanding of how persons can function optimally. According to Ryan and Deci (2000), the SDT serves as "an organismic meta-theory that highlights the importance of humans' evolved inner resources for personality development and behavioral self-regulation" (p. 68).

This illustrates that the model is mainly centered on the internal elements likely to offer required support to the development of self-regulation and healthy personality traits, including competence, autonomy, and relatedness The model has broad motivation-precise implications necessary to recognize the ultimate experiences of college learners diagnosed with ADHD. Several factors demonstrated that the model is a suitable theoretical model for understanding the interplay between self-motivation and the external factors in determining student well-being. The researcher plans to use SDT as the theoretical framework to understand how the essential psychological needs of autonomy, relatedness, and competency promote optimal health and well-being for college students with ADHD. Further, numerous studies using SDT suggest that intrinsic motivation results in quality learning because it involves doing interesting and enjoyable activities. Learners with ADHD are likely to experience competence whenever they are being challenged and provided with prompt feedback. Additionally, these students are believed to experience autonomy whenever they perceive that they are empowered to discover, take the lead, and develop alternatives for their specific problems.

Learners tend to experience relatedness as they receive feedback and encouragement from others. They are also more intrinsically inspired and actively involved in their learning. On the other hand, extrinsic motivation, a sub-theory of SDT, derives from external sources to offer explanations about varying ways externally motivated behavior is controlled. The researcher aimed to assess the impact of motivational factors such as teachers, grades, and university administration, on student well-being and mental health.

The available literature demonstrates that self-determination results in substantial benefits to learners with learning shortcomings (Field et al., 2003). The literature review also revealed that self- determination is closely linked to several positive outcomes among learners with disabilities. For example, it is linked to improved self-esteem, physical and psychological health, and improved overall well-being (Anctil et al., 2008). This is an indication that successful learners acquire augmented levels of self-awareness and comprehension of their disabilities. Ward (1988) termed self-determination as a perception that encourages persons to describe goals by

themselves and undertake specific initiatives to realize their outlined goals. The definition of self-determination is perceived as a strategy or a series of actions that entails determining objectives, identification of actions required accomplishing the purpose, and removal of barriers likely to hamper goal realization (Ward, 1988). In their study, Argan et al. (2000) employed a self-determination learning framework of instruction. The study revealed that 89% of the learners were able to realize individual goals. Additionally, the model was established to be valid for disabled learners.

ADHD Global Disorder

The review of relevant literature demonstrates that ADHD is a common disorder that is diagnosed across the world. Nonetheless, the diagnosis of this particular disorder is problematic and is influenced by multiple factors of a child's upbringing, including parents/guardians, health practitioners, society, and educators. The knowledge concerning appropriate diagnosis, as well as treatment of this disorder, is critical. A successful diagnosis of ADHD depends on the child's family and the community's active participation. Without acknowledging the importance of diagnosis and treatment, and generally, without having a clear understanding of ADHD, there will continue to be obstacles that hinder the ability to implement more effective treatment and engagement by healthcare workers and educators alike.

More breakthroughs in the clinical research space can improve diagnosis approaches and disseminate relevant information. The diagnosis of ADHD has continued to expand within varying nations and cultural backgrounds. Different countries face equivalent rates to those witnessed across the United States and the United Kingdom since the identification of ADHD back in the 1970s (Faraone et al., 2009).

There are varying concepts and views concerning ADHD as a result of distinct cultures, political and historical backgrounds, and individual factors. Very few studies assessed the impact that cultural perspectives have when diagnosing and treating ADHD empirically. Additionally, the market for pharmaceutical medicines has expanded considerably. For instance, the use of MPH has increased as a treatment for ADHD. There are also several support groups to encourage self-diagnosis as well as identification of ADHD. The approaches have boosted the disorder's awareness and have developed a technique for diagnosing via "disease brokers" involving parents and educators (Conrad & Bergey, 2014).

Being diagnosed with the disorder does not necessarily hinder learners from achieving their education or their career objectives. Nevertheless, persons with ADHD normally underperform compared to their age mates without the disorder (Bernfort et al., 2007). Bernfort et al. (2007) further posited that learners struggling with this disorder face challenges in social situations and have problematic communication at both personal and professional levels. It was also reported that persons with this disorder have fewer years of formal education, low graduation rates, low grades, and failed courses, which are likely to adversely influence their employment outcomes and career selections.

The review demonstrates that ADHD considerably impacts a learner's academic achievement, social functioning, learning, and behavioral functioning. Due to this disorder, university learners experiencing challenges vary from the general populace who have not enrolled for a college education. Their enrollment in colleges has seen them excel academically at the secondary school level and develop valuable compensatory skills (Glutting et al., 2002). Nonetheless, when learners with this disorder are compared to typical college peers, they are at high risk of underperforming, exhibiting emotional instability, and dropping out of school (Lee et al., 2008).

While there is an increasing number of people with an ADHD diagnosis seeking post-secondary tutoring, most learners' lives are challenging. Post-secondary education often has higher organizational demand and is absent of direct parental or teacher support; thus, persons with the condition often find difficulty transitioning from adolescence to maturity while pursuing a college degree. Their life changes, combined with the symptoms of ADHD, result in a challenge for ADHD students navigating a post- secondary setting. Students with an ADHD diagnosis find that their academic performance is negatively affected, resulting in education failures, early school dropout, and increased potential issues with drugs and alcohol. Advanced diagnosis and improved screening methods of ADHD may be appropriate for these institutions to better serve this student population's needs.

College learners with ADHD require detailed documentation of various disabilities to secure accommodations in their post-secondary level, so additional support and accommodations may be necessary to help students with ADHD overcome the challenges of attending post-secondary educational institutions. This is to ensure these students can reach their full academic potential. Colleges can adopt numerous intervention strategies to assist learners with this condition. These forms of interventions involve accommodations, prescribed medicines, and educational-based interventions, such as self-management and coaching treatment. There is a need for further research to explore the impact of ADHD treatments on long-run educational accomplishment. The use of pharmacological treatment can treat ADHD symptoms and promote executive functioning and result in a higher success rate at the college level. The realization of non-medical interventions, such as coaching and CBT, can help them complete their academic studies successfully. ADHD-based coaching assists participants in developing relevant skills, behaviors, and strategies to cope with the disorder.

The diagnostic criteria for ADHD tend to raise serious queries among clinicians and social scientists (Singh et al., 2013). There has been a move from the therapy framework to the skill/coaching model to consider how individuals may have access to ADHD treatment (Hartmann, 1993). Technological advances might offer practitioners guidance concerning the best approach for deliberating about the cultural dissimilarities linked with ADHD worldwide.

The review demonstrates that learners impacted by the disorder are highly exposed to the risk of stigma, discrimination, and prejudices. The chapter also suggests that it is necessary to explore an education program's effectiveness in identifying an instruction for learners with unique needs and the extent to which these programs are likely to assist future school leaders in offering differentiated instructions. It is also vital to ensure teacher

professional development to positively influence learners' academic successes with ADHD. Designs for future research need to focus on enhancing educators' knowledge concerning ADHD. Previous scholars support the notion that educators' familiarity with learners' diagnosed with this disorder connects them to the students (Kos et al., 2004). Education regarding ADHD enhances learners' knowledge (Barbaresi & Olsen, 1998). Continuous research efforts serve as the only way to transform the education process that can positively affect the lives of learners struggling with ADHD.

The results of the review showed that higher learning institutions, as well as school districts, have failed to prepare special educators adequately. A significant amount of resources in terms of time, personnel development, effort, curriculum, and execution seem to bear minimal effects on educators' preparedness to handle learners with ADHD. Professional development of educators can be fulfilled via the findings of the present research. Universities/colleges and other educator's education programs need to improve overall preparedness to handle this particular disorder that impacts learners' experience (Guerra & Brown, 2012). Educators can impact every students' success by increasing their awareness of this disorder and educating those concerning ways to develop strategies that assist learners with ADHD to become successful.

Results

In this study, eight college students were interviewed individually by the researcher to explore their college experiences as students with diagnosed ADHD. The researcher explored the participants' college experiences through various questions that sought to investigate their disability identity, internal and external support systems, and interactions with the DRC. The participants responded to these questions and other supplemental follow-up questions, providing insight into their college experience and university resources.

After the interviews were concluded, three central themes were identified from the data collected. The reoccurring themes were as follows:

- Disability Identity
- External Support Systems
- Internal Support Systems

The researcher worked to understand the perceived experiences of undergraduate college students with diagnosed ADHD with respect to the support services that utilized "strategy, technology, and accommodations" that were helpful in their college experiences. During the participants' time in college thus far, their social connections and gained freedom worked to empower them to excel in their studies at the university. This resulted in the individuals of this study gaining an enhanced sense of ownership of their successes and shortcomings to better navigate their academic pursuits. It was exposed through the research that the participants of this study benefitted from an early ADHD diagnosis, a combination of treatment (both medication and tools), and the general setting of college. In the college setting, the participants gained an enhanced perception of their identity and self-worth.

When participants were diagnosed at an early age, they were better able to accept and learn with their disabilities. Also, discovering and implementing tools or medication helped them to better navigate the world around them. Early diagnosis, internal acceptance of disability, and treatment of ADHD through medication were the key elements to their growth and academic success at college.

The research also demonstrated the importance of how external systems impacted the participants' lives and wellbeing as they navigated college. Parents, siblings, friends, professors, and the DRC were all identified in this study as important contributors to their college journeys. According to the participants varying experiences, backgrounds, and relationships impacted their identities and abilities to navigate stigmas associated with their ADHD. The research showed that parents, siblings, and friends were factors that were both encouraging (i.e., they helped with diagnosis and providing support) and discouraging (i.e., parents sometimes struggled to locate resources and sibling relationships offered unfair comparisons). Overall, the individuals of this study were satisfied by the resources provided by the DRC, navigating and utilizing tools such as testing accommodations, and one-on-one advisor sessions.

Additionally, the DRC provided the participants with a "safe-space" to advocate for additional accommodations and/or resources. Although the DRC was a positive entity in the participants' lives, some participants struggled to coordinate their accommodations with other university offices and remained anonymous amongst their classroom peers. Both university affiliated entities and personal relationships provided external support elements that positively impacted the participants' college journeys.

This study's participants shared external factors that impacted them the most as they transitioned to college life. The researcher also investigated the interplay between personality traits and the surrounding academic and social environment. The participants described how their environments and resources worked to help them grow. Additionally, each participant's characteristics also reflected how they navigated through challenges and sought opportunities to grow and learn. How each participant approached their learning varied, leading to an array of reactions from friends, family, and educators. The environment and the support systems in which the participants found themselves played a large role in their college experiences. All of the study's participants received accommodations from the university and the DRC, potentially correlating with increased self-autonomy.

As the participants of this study increased their amount of self-autonomy, it was often correlated with the amount of self-regulation they exhibited. This process of proactively using one's abilities to define and develop effective learning strategies was exhibited through the following:

- Defining goals and creating strategies to be able to achieve them
- Reflection of one's actions and steps taken to reach goals
- Delegating time and effort towards goals and tasks
- Reflecting and evaluating one's approach to retaining and gaining knowledge

Internal and external motivational factors impact students with ADHD as they navigate college life, as seen in the participants of this study. The participants made their own choices and accomplished their academic goals through developing adaptive behaviors that encourage self-regulated living and learning. Connections made at home, on the sports field, in the college community, and in the classroom worked to facilitate a balanced life and solidify the participants' awareness of their disabilities related to the world around them. The researcher found that self-governance and the ability to identify themselves as learners were essential to the participants' successes in college. In the coming chapter, the researcher will explore the limitations of students with ADHD in college settings and provide recommendations and future research needed to better support students with ADHD across university academic and social resources.

Recurring Themes

The purpose of this study was to investigate how undergraduate students at Northeastern University perceived their educational journey with ADHD, their knowledge and awareness of ADHD, how their disabilities affected their lives, including their upbringing and educational journey, how their disability identification came to be, and salient moments in their development as learners. The analysis of the gathered data yielded three super-ordinate themes and 10 corresponding subthemes. Super- ordinate themes and subthemes were identified as those recurring in at least five participants' interview data.

Table 2 presents a list of each super-ordinate theme and its accompanying sub-themes.

Table 2. Recurring Themes

Super-Ordinate Themes/Subthemes	P1	P2	P3	P4	P5	P6	P7	P8
Theme I: Disability Identity								
Importance of Early Diagnosis/ Acknowledgment of Disability	x	x	x				x	x
ADHD & Another Disability	x	x	x	x	x	x	x	x
Medication/Stigma								
Impact of ADHD on College Setting/Education	x	x	x	x	x	x	x	x
Theme II: External Support Systems								
Parents/Siblings	x	x	x	x	x	x	x	x
Friends	x	x	x	x	x	x	x	x
DRC	x	x	x	x	x	x	x	x
Theme III: Internal Support System								
Internal motivation	x	x	x	x	x	x	x	x
Self-awareness of disability	x	x	x	x	x	x	x	x

Conclusions

Eight undergraduate students, who self-disclosed their ADHD through Northeastern University's DRC, were the voices of this study. During in-depth one-on-one interviews, participants were asked a set of semi-structured questions. This qualitative study sought to understand college student's experiences with the phenomenon of ADHD and how their experiences impacted their self-awareness as a learner. Furthermore, this study aimed to understand the external and internal factors that impacted their college journey and provide university personnel with recommendations to guide better, support, and serve this student population. Subordinate themes of this study included disability identity, external support systems, and internal support systems allowing the researcher to identify all factors relevant to the college experience for the ADHD student population.

The first research question aimed to understand the interplay between individuals with ADHD's personality traits and their surrounding academic and social environments. The first element of this study sought to understand a college student's ADHD diagnosis and acknowledge themselves. The first finding was that early diagnosis of an individual's ADHD is an essential component to an individual's ability to grow and succeed in a college environment. This study specifically looked at the impact of early diagnosis as it relates to the establishment of one's identity.

For study participants diagnosed with ADHD before entering college, their disability and their parent's approach towards their disability extensively shaped their identity. Their parents' approach to obtaining accommodations for their children while in K-12 was similarly exhibited by the students of this study in their approaches to obtaining their accommodations at college. When participants were diagnosed earlier, it gave them time to better understand and navigate their education with their disability. The utilization of their prescribed medication to alleviate their ADHD symptoms further helped the individuals of this study.

The second research question of this study aimed to understand how college students with ADHD utilized university support services (i.e., particular strategies, technology, or accommodations) to enhance their educational experiences and identify the internal and external motivational factors that impact their college life. Additionally, this component sought to identify and understand the impact that external support systems have on college students with ADHD. The second finding of this study was that individuals with ADHD who have strong connections with family, friends, university personal, etc. are more successful in their pursuits.

The interviews conducted in this study were essential in identifying family, friends, professors, coaches, disability service personal, and others as influential critical components in this study's lives. Currently, policies and procedures exist to help guide these supportive external entities. However, the research has illuminated that implementing these elements is fragmented and challenging to navigate for the individuals they established to assist. Support services at universities and people of influence work to help college students with ADHD navigate a productive path of well-being, academic success, and social endeavors.

The third question of this study aimed to understand how college students with ADHD make their own choices and work to accomplish their chosen life goals. The third finding of this study was that internal motivation and awareness of one's ADHD works to establish a sense of self and enhance one's ability to excel across various environments. This study's interviews illuminated that when college students with ADHD understand the challenges their ADHD presents, awareness allows them to navigate obstacles and self-advocate. Understanding themselves, their learning styles, and how to excel as individuals with ADHD empowers decision-making and solidifies independence. Additionally, practicing and exhibiting the ability to manage one's time allows students with learning disabilities to motivate internally and promote self-determination. Self-awareness and self-confidence are essential for students with ADHD in their college pursuits, fueling their internal motivation.

The examination of the qualitative data that emerged from this study provided footing for continuing research to inform laws and practitioners contracted to teach at institutes of higher education. The following sections discuss the impact and prospects for future research, college recommendations, and potential consequences of implementing the discussed recommendations.

Recommendations for Practice

The research goal was to interpret lived experiences of students with ADHD attending college to reflect on how to continue developing strategies for enhancing the services to this population and ensuring their academic and life successes. The following recommendations are suggested based on the finding discussed previously.

Create Education and Awareness about ADHD among Faculty and College Personnel

Faculty are under-prepared for or are lacking awareness and knowledge of ADHD inclusive methodologies and interpersonal skills, laws and legal obligations, and perceptions and attitudes about students with ADHD. Implications include the need for college-based interventions to support students with ADHD. The lack of skills and training for educators regarding how to handle students with ADHD is an important topic. This study investigated how educators handle students diagnosed with ADHD in college. These findings highlight that higher education institutions have not successfully prepared the special education preparation needed for college personnel. Implications for policy, future research, and practice point to a need for a more intentional and holistic approach to faculty personnel preparation.

Research indicates that it is essential to empower students with ADHD for academic success and educate others about their disability (Kurth & Mellard, 2006). The goal is to provide equal access in all areas of the campus. To accomplish this goal, educators must actively educate themselves on their current issues and work to infuse the campus community with this knowledge. Access should not be limited to classroom learning; rather, the entire campus environment should be shaped according to universal design principles. Leadership must view an essential aspect of campus diversity and allocate funding to support educational initiatives.

Promote Multi-disciplinary Collaborative Leadership

Higher education institutions should commit to collaboration, distributed leadership, and involving others in their work. Empirical evidence from research studies has suggested a positive correlation between distributed leadership and change outcomes (Harris, 2008). Research studies also suggest that distributed leadership can benefit ADHD intervention (Meyers & Bagnall, 2015). For ADHD programs to be effective, involving as many stakeholders as possible should be executed when implementing programming (Meyers & Bagnall, 2015).

Research suggests that administrators, faculty, college personnel, advisors, psychologists, and social workers should be involved in planning, adopting, implementing, and evaluating university ADHD programming (Meyers & Bagnall, 2015). Colleges should take on a college-wide approach to ADHD programming. All members are involved, and that approaches to teaching college students with ADHD are taught across the curriculum and tied into all aspects of the college (McCormick & Mohiuddin, 2018).

Equip Learners with Tools to Strengthen Autonomy and Self-regulation

The objective is to provide learners with methods and tools to help learners achieve a balanced approach to internal and external motivation. As demonstrated through this study, learner autonomy is an important goal to be successful academically and socially. By encouraging self-assessment and control, learners would fine-tune their approach to learning through self-regulation.

The external motivational side, faculty, academic advisors, disability resource center staff, and other various student groups may contribute by providing guidance that strengthens the students' learning, study strategies, and self-regulated behavior. There is ample evidence that creative student engagement strategies will improve retention and higher graduation rates of students with ADHD. Explicit opportunities could be demonstrated through program or learning outcomes, co-curricular programming, or academic policies.

Facilitate Self-advocacy

The value of human dignity and self-advocacy must be honored in working with students with ADHD. Increased learner autonomy depends on self-regulated behavior when it comes to learning. Participants should be encouraged to construct and share meaning related to their ADHD and their social and learning challenges.

The Disability Resource Center staff can contribute by hosting workshops and discussion sessions with transitioning students who self-identify as having ADHD. In exchange, participants will share their sense of who they are with others, such as their peers. Through this process, they will learn how to speak for themselves and push for their rights.

Mentorship Groups

Research conducted in this study leads to the recommendation to create two mentorship programs that provide college students with ADHD a space to discuss and navigate the social and academic challenges. One group should comprise trained professionals that help students navigate their challenges while transitioning to college and throughout their time at college. Another recommendation is an ADHD peer-to-peer group run by upper-classmen with ADHD, providing a space for others with ADHD to share their experiences and create a community in the college setting. Instituting a peer mentorship program for students with ADHD allows them to access someone of their age who is experiencing similar struggles/successes both academically and socially. This will help students with ADHD recognize that their peers faced familiar challenges and that sharing success stories and best practices is an effective way of navigating college challenges, building self-confidence and resilience.

Peer ADHD group discussions will help advisors and teaching faculty better understand the tools needed to develop effective mitigating strategies. The establishment of allies that students with ADHD create helps them during their college experience. Assembling a group of individuals (i.e., peers, professors, university staff, etc.) can help affirm who they are and create an environment for students with ADHD to feel to share concerns and achievements, inevitably enhancing self-confidence and ability to excel a college setting.

Strategies and Tools

Another recommendation is to create a newsletter, allow for early course registration for students with ADHD, and provide an ADHD-specific testing environment. The newsletter would be focused on students with ADHD and highlights workshops for students and staff/faculty, give recommendations of practices, highlight student successes, announcements, and more. Additionally, allowing students with ADHD to register early for their classes and prioritizing their registration would allow this population to best manage their classes. It also can mitigate any anxiety about their course selections and allow for them to select classes that synchronize with their medication. Lastly, creating an optimal testing space that meets ADHD college students' unique needs will allow them to thrive during their course specification evaluations best.

As emphasized previously, the transition from high school to college presents challenges for those with ADHD. Implementing effective processes, strategies, and tools to navigate this pivotal moment are needed. When establishing these processes, the impacted students must identify their support structures gradually reduced throughout their lives. When students with ADHD are in high school, their parents are their primary advocates, but when they start college, that responsibility shifts onto themselves (Schiffrin et al., 2013).

Having university resources to help with this transition and providing the correct support structures is essential to these students' success throughout their college experience. Having workshops, webinars, or readily available information provided by the university to transitioning ADHD diagnosed students, as their needs differ from the

neurotypical peers, will promote self-regulatory behavior and increase autonomy. The implementation of this support element will improve the college experience of those with ADHD, overall reducing their transitional concerns while increasing their ability to effectively self-regulate and nourish their well-being.

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Effectiveness of Flipped Learning versus Traditional Learning in a Middle-School Chemistry Classroom

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Abstract: Flipped classroom learning methods have been gaining a lot of popularity in recent years. Educators have recorded many mixed results about the effectiveness of this method to achieve superior concept retention in students. Although there has been lot of research published about flipped learning, very little is known how this method affects the learning of Chemistry among middle school students. This study was conducted in two Science classrooms with 3 blocks each over a period of three consecutive days. A total of 122 students took part in this study where 75 students were taught using flipped learning approach whereas 47 students were exposed to traditional method. The students were given pre-test one day before the lesson and taught the next day using the respective teaching methods followed with a post-test on the third day. Findings demonstrate that the average post-test scores for students in flipped learning were higher as compared to traditional method. Additionally, at the end of the study, the students with flipped learning shared their perceptions about the approach.

Keywords: Flipped classroom, Chemistry, Middle School

Introduction

With the ongoing rapid advancements in technology, educators understand the need to incorporate digital technologies into the classroom. Such advancements could not only help generation Z to better engage with their learning content, but also go a step further to create a learning environment that is more student-centered. One of the recent advancements is the flipped learning method which has proven to be impactful in teaching. This approach promotes collaboration by flipping the traditional instruction where the content is delivered outside the classroom in the individual space using technology (online), whereas the group space (classroom) is used for hands-on learning (Winter, 2018).

Recent years have seen a rapid increase in students seeking online education because online learning provides a

lot of benefits including the ease with which it can be completed while serving different kinds of learners (Allen & Seaman, 2013). This has made learning possible in every situation where the learner can be equipped to take classes at any geographical location at their own convenient pace and time. Such learning opportunities have opened doors for people for whom it was otherwise not possible to gain higher education. An online education basically utilizes online flipped learning methodology where lecturing primarily takes place by watching a video on the lesson content followed by online discussion and assignments.

As the name suggests Flipped Teaching is also famously known as flipped classroom, upside-down teaching, inverted instruction, and backward class. This model shifts the teacher's role as a facilitator and the students become in-charge of their learning (Bergmann & Sams, 2012). In this student-centered instruction, learners first complete the lesson content prior to attending the class by watching videos, completing guided notes, doing online exercises and quizzes. Next the students come in-class and get the opportunity to apply and extend their learning by participating in hands-on projects, classroom discussions, small group activities, and student presentations.

In the flipped learning classroom, students actively participate in the learning process and become responsible for their own learning. Moreover, as there is not much traditional lecturing taking place, there is more class time for teachers to conduct problem solving and higher order learning activities to challenge strong learners whereas provide individualized learning support to weaker students (Kim, Kim, Khera, & Getman, 2014). Thus, this method additionally provides a way to differentiate learning, therefore increasing the overall learning opportunities for each child in the same classroom.

The effectiveness of flipped learning is a topic of continuous investigation in literature. Lo and Hew (2017) provided the literature overview of flipped classroom studies through the analytical lens of "six thinking hats" model that highlights 6 directions - information (white hat), feelings (red hat), thinking about thought (blue hat), creative (green hat), challenges (black hat), constructive (yellow hat). This study also proposes a set of guidelines to address the various challenges reported by other research studies. As part of future research, authors suggest utilizing a pre-test to evaluate the initial equivalence among groups and to investigate consecutive uses of flipped classroom approach with a longer time frame.

Smallhorn (2017) performed a comparative quantitative analysis on the flipped classroom on second year college students where biology lectures were replaced with short online videos and pre-class readings and quizzes. The impact of this approach was analyzed through surveys, attendance records, learning analytics, and exam data. It was found that though this model took some time to gain popularity amongst students, it eventually encouraged them to apply what they had learnt, challenged their understanding of the material, and gave them a forum to ask questions to peers and educators. However, the results showed no measurable impact on academic gains as the exam scores and topic scores for both the traditional and flipped cohorts were very similar. Islam et al. (2018) present a quantitative study to assess and compare students learning outcomes in

college level dental science students. The study was a case control design that took 50 first-year students divided into small groups of 25, each to form, an experimental group (flipped learning model) and control group (traditional learning method). Although students scored higher marks by the flipped learning method there was no significant difference observed between the two methods. However, students expressed their positive perception which reflects their acceptance of this method.

Jdaitawi (2020) utilized a quantitative comparative study between traditional and flipped classroom approaches by analyzing their effects on 65 college students enrolled in science course and found that flipped classroom approach helped students' active learning and enjoyment of the course. However, due to the focus on college students, such results could not be generalized for a larger population. Shyr and Chen (2018) conducted a qualitative analysis to examine whether technology enhanced flipped language learning system could enhance college students' self-regulatory skills. This study was conducted over 9 weeks in which 81 sophomore non-English major students in a required Applied English course are divided into 2 groups of traditional learning and flipped learning. Results showed flipped system offered more effective and engaging learning environment as compared to the conventional flipped classroom.

Other researchers have also investigated the effectiveness of flipped learning method on school students. Sojayapan and Khlaisang (2020) utilizes a quantitative approach to examine the effects of flipped classroom on 30 students studying in upper secondary school. Their results showed that flipped classroom model with videos followed by online group investigation allowed students to carry out different activities as a team and help establish a sense of responsibility for learning while achieving their individual learning goals. Winter (2018) conducted a quantitative analysis to investigate a middle school classroom focusing on a 6th grade social studies course at a K-12 private school in Hawaii, to identify the relationship between student motivation and performance in a flipped learning course. The paper contends that at high school level, online learning studies have shown correlation between performance and self-efficacy, whereas at the middle school level where learning differences are profound, motivation and engagement have shown to increase within technology-supported learning environments.

Thus, although there are many works in literature focusing on flipped learning, the research in middle school children is limited. There has also not been an investigation of flipped learning in middle school Chemistry classes. This paper is a quantitative and qualitative study into the effects of flipped learning on middle school Chemistry classes. The following sections lay out the specific research questions and methodology carried out in this research followed by the findings and implications of this work.

Research Questions

The aim of this study was to compare the students' achievement outcomes in Eighth grade Chemistry class through flipped learning model and traditional lecture model. All students completed a multiple-choice pre-test

and post-test. Additionally, students in flipped learning model were also asked to take survey at the end that reflected their views about the learning model. After analyzing the above literature, following research questions were defined:

- RQ1: Does the implementation of the FCM in middle school Chemistry course lead to improved students' cognitive learning outcomes as compared to a traditional learning model?
- RQ2: Do students feel positive about their learning through FCM?

Method

Participants

The participants included 122 students from two classes studying eighth-grade Chemistry in a public middle school situated in northwestern Pennsylvania. Each class consisted of three blocks of students. The students were divided into 2 groups – control group and experimental group as shown in Figure 1. The control group (block 3 from both classes), including 47 students, learned through face-to-face lectures from teacher that lasted for a majority of time followed by a post-test. On the other hand, the experimental group, consisting 75 students (blocks 1&2 from both classes), learned through video-based lectures that were completed out-of-school followed by active in-class learning activities in the form of tactile projects, demonstrations, and discussions followed by a post-test.
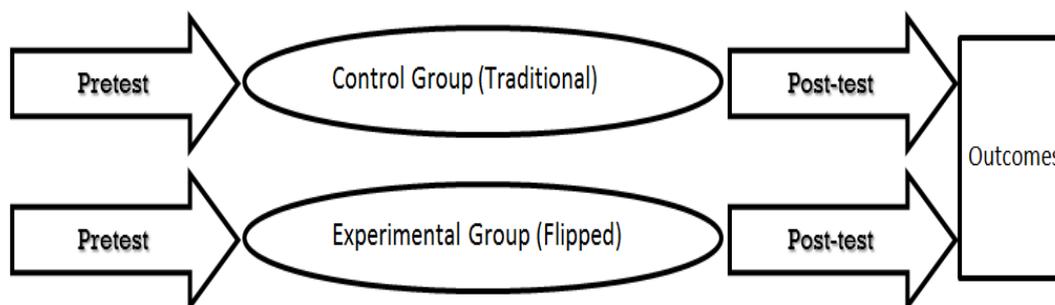
Figure 1. Control Group and Experimental Group

Design Method

A quasi-experimental quantitative study was conducted to evaluate the effectiveness of traditional versus flipped learning for above mentioned middle-school Chemistry course. The curriculum was taught by a student-teacher who was supervised by two experienced teachers in their own classrooms. The students participating in the study were anonymous and allowed to quit at any time (by removing their corresponding data). Both classroom lectures ran in three-block schedules. This study was conducted over a period of 3 days on a single topic for about 80 minutes through both the learning methods in block schedules. Blocks 1 and 2 in both the classrooms were taught using flipped learning whereas block 3 in both classrooms learned using traditional method as shown in Figure 2. All the students were taught the same topic through the same progression of concepts.
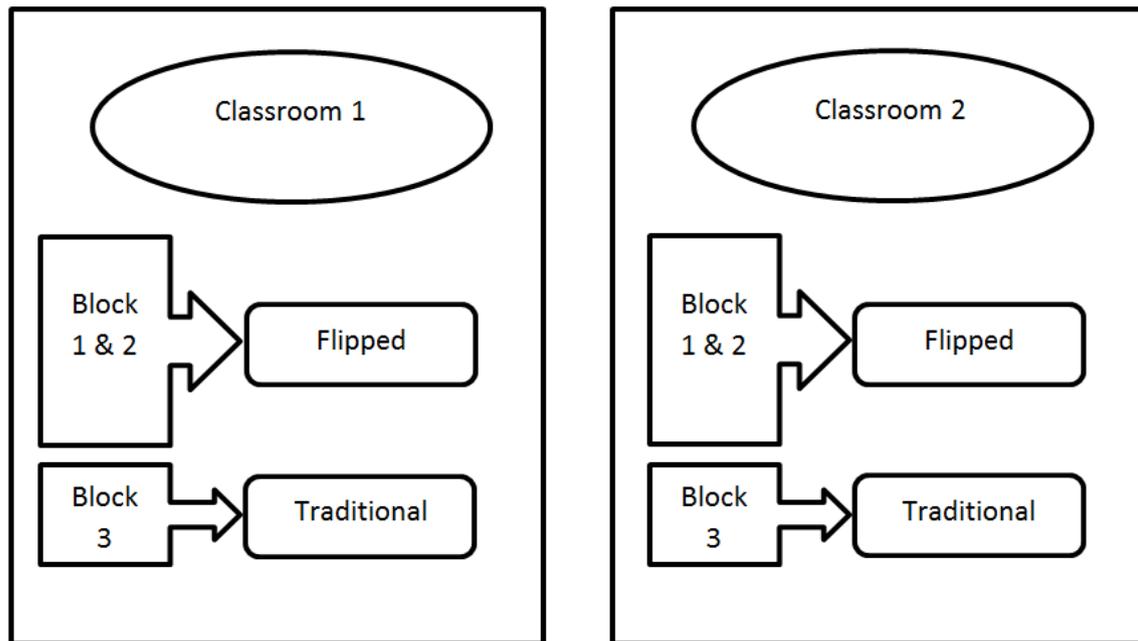
Figure 2. Block Chart of Classroom Grouping

Procedure

On the first day, students in all the blocks gave a pre-test that included 10 multiple choice questions on the school's learning management system called *Schoology* and the students were given a brief overview of the experiment to be conducted over the next two days. On the same day, students in flipped classroom model (blocks 1&2) filled a flipped classroom readiness survey. They were asked to watch teacher prepared videos that lasted for not more than 15 minutes after school. The videos included teacher explaining concepts, short clippings showing demonstrations and talks from other experts. Students were required to watch this lecture video prior to coming to the class. Students were given a day to watch the videos (multiple times if the student desired) and expected to fill the skeletal note sheet for that lecture video and submit to the student-teacher. The skeletal notes helped the student-teacher know which students had watched the video and segregate students into three stations. The first station consisted of students that had not completed the at home assignments (watching the videos and filling the skeletal notes). The second station consisted of students who had done the work but had scored below a threshold on the skeletal notes. The third station consisted of students who had both done the work and scored above the threshold on the skeletal notes. The skeletal notes also served as lecture notes that helped students to carry out discussions in-class and for any future reference.

On the second day, students in traditional classroom model, block 3 for both classes were combined and attended face-to-face instruction from the student-teacher. The lecture was teacher-centered for the maximum part for a total period of 80 minutes wherein the student-teacher explained the concepts and students asked questions. All the students of the traditional method were given homework and asked to submit it the following

day. On the same day, the students in flipped classroom model, blocks 1&2 from both classrooms were combined and directed to work at the three different stations of the classroom. Through this differentiated learning approach, the student-teacher was able to devote time in tune with the needs of the three stations. Additionally, the student-teacher could also use this learning space to individually help and personalize instruction to struggling students who needed more help. All flipped model students could actively participate in reinforcement activities that included small group discussions, role-play, presentations, etc. During this student-centered learning activity time, the student-teacher acted as facilitator and guided students' learning by scaffolding instruction whenever necessary. The same assignments that students completed as homework in traditional classrooms were given to students in flipped classroom model. The only difference was that students in flipped classroom model completed them during the class time by engaging themselves in various hands-on learning activities independently and/or in groups as preferred by the students.

On the third day, students in both flipped and traditional model were given the same post-test to evaluate their understanding. All the test questions were aligned with state science standards and had content-related validity. Additionally, only the students in flipped classroom model took part in a survey that contained multiple choice questions and few open-ended questions that asked them about their perceptions on the model. The survey consisted of 6 multiple choice questions and 4 short-type questions. At the end, the results of the performance of all the blocks on the post-test were also shared with all students to get more student involvement in this method for future classes.

Results

The study collected data from all 122 students and conducted an analysis using Excel spreadsheet. The data was collected from all the students (blocks 1, 2 & 3) of the two different classes that were given pre-test and post-test. As seen from Table 1 below, the percentage increase in students' scores were calculated based on the average pre-test and post-test scores. Results showed a higher percentage increase scores of students in blocks 1 and 2 who were taught using the flipped learning methodology as compared to block 3 students who learned through traditional approach.

Table 1. Percentage Increase in Student Scores (Block1/Block 2: Flipped, Block 3: Traditional)

Classes	Average Pre-test	Average Post-test	Percentage Increase in Student Scores
Classroom 1 Block 1	7.40	8.73	18.02%
Classroom 1 Block 2	6.22	8.83	41.96%
Classroom 1 Block 3	8.04	8.50	5.70%
Classroom 2 Block 1	6.30	8.30	31.75%
Classroom 2 Block 2	7.10	9.10	28.17%
Classroom 2 Block 3	7.39	7.91	7.06%

Table 2 below shows an excerpt which is representative of what students felt in general about the flipped classroom model. Each line represents a response from a different student.

Table 2. Student Perceptions

Student Comments
"The freedom"
"I liked the activities we did because it's more engaging"
"I can do the work at my own pace"
"That I was learning in a fun way"
"I enjoyed the Flipped Classroom and thought it was both engaging and educational"
"I do not like the flipped classroom, but it can be more fun not having to rush through the lesson"
"I liked the fact that it made the work easier because I could understand better"
"I liked to communicate with people in the class that I don't really talk to"
"I cannot ask a teacher if I don't understand something"
"I liked that we were able to have more fun in the classroom"
"I like how we got to engage with other students"
"I liked how we can do things on our own time and pace"
"Sometimes it can get hard and students might get confused"
"That when you come to school you can do more practice"
"I could sit in my bed and learn from home"
"I liked how we were able to do it at our own pace"

Discussion

Figure 3 shows the comparison of average pre-test and post-test scores between all the 6 blocks from both classes. From the results it can be concluded that the learning methodology does have a lot of impact on student learning and their scores. Blocks that were taught using the flipped model learned more effectively and performed better on their post-test as compared to their pre-test. There was more increase seen in the post-test scores as compared to their pre-test scores for blocks 1 and blocks 2. On the contrary, block 3 in both classes did not show much increase in their pre-test to post-test scores that shows that the learning methodology in block 3 was not as effective as the learning methodology in blocks 1 and blocks 2.

Figure 4 shows the graphical line plot of the percentage increase in student scores. The combined four blocks that have received flipped learning approach show uneven increments in the improvements seen through this approach accounting for the difference in makeup of the students. It can be satisfactorily inferred that flipped learning approach in block 1 and block 2 results in a significantly higher positive spike in student scores as compared to block 3 that received instruction using traditional approach.
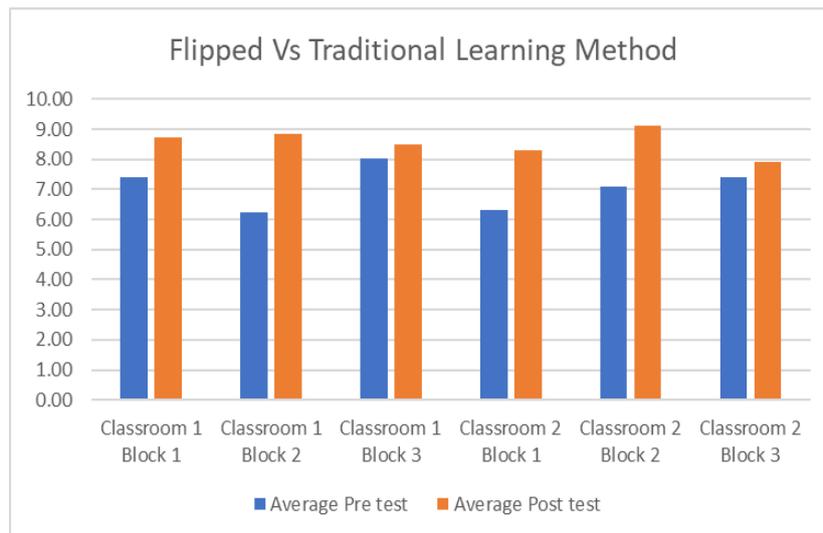
Figure 3. Flipped Versus Traditional Learning Method

As can be inferred from Table 2, the student perceptions about flipped classroom model seemed quite positive and encouraging. From the general feedback, we can conclude that students supported this mode of learning for its convenience, engagement, reinforcement, and retention. There was also some negative feedback from the students regarding teacher's availability, at home time management and content complexity.
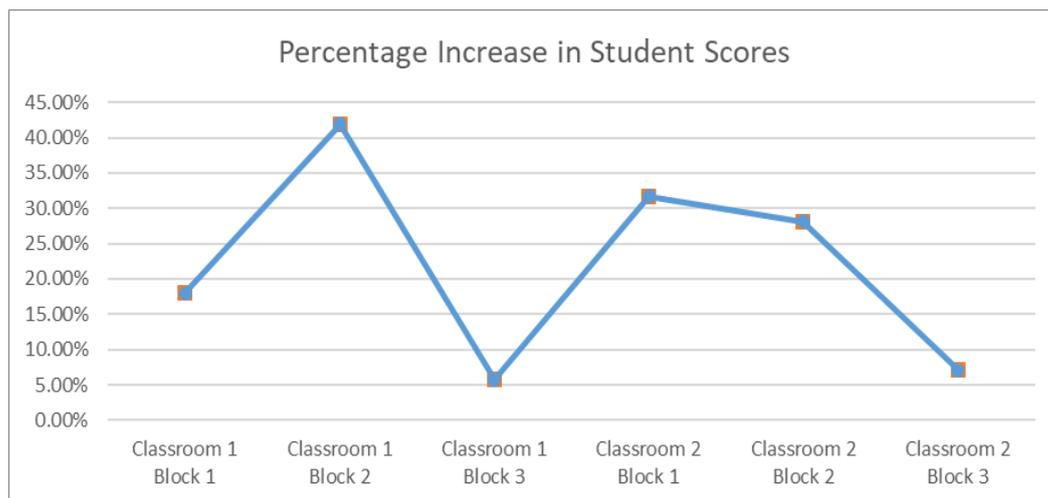
Figure 4. Percentage Increase in Student Scores

Before the post-test was conducted, students in blocks 1 and 2 were encouraged to revise the concepts at home by watching the flipped video and studying the skeletal notes prior to attending class the next day, as compared to students in block 3 who revisited the concepts using homework given to them. The results showed higher learning outcomes for students in flipped classroom. These students got the opportunity to learn better using hands-on activities and revise the concept multiple times at their own convenience by watching their teacher on flipped video prior to the post-test.

Conclusion

The quantitative results of this study revealed how flipped learning model could help increase students' learning outcomes as compared to traditional learning. The qualitative results also indicate that this method is overall well received by students. As generation Z is more inclined towards using technologies, flipped learning method could help kids engage better in their learning and increase their understanding of the content. This method focusses on doing more hands-on learning in the classroom that could further increase student interest leading to more profound grasp of science concepts. As majority of theoretical concepts are covered outside the classroom at least once, the concepts get more reinforced when students do additional work on important concepts within the classroom through discussion and teamwork. Moreover, flipped learning methodology can also prove effective in differentiating instruction as teachers could have more in-class time available that could be used to provide individualized learning to kids whose need more time to grasp concepts and more personalized instruction. Thus, we can conclude that the implementation of flipped classroom model in eighth grade Chemistry could lead to improved cognitive learning outcomes in students as compared to in traditional learning model.

Recommendations

The results of this study could not be generalized as it is conducted over a shorter time duration. Future studies could consider implementing a similar study on a longer time frame. A longer study could offer the opportunity to test the effectiveness of flipped learning on multiple lessons with varying degree of complexity for the same set of students. Further research could also be conducted to find if there was any difference by gender in the reception of flipped learning. This study also considers participants from only the eighth grade. If future studies could widen their scope to include students from all grade levels in middle school, it will lead to more insights on how and when flipped learning will be an effective teaching strategy.

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Negative Life Experiences, Substance Use, Well-Being, and Resilience: A Comparison of Deaf and Hearing Adults

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Abstract: Individuals who are deaf and use American Sign Language (ASL) as their primary mode of communication experience unique negative life experiences, such as lack of communication, limited access to services, marginalization, and discrimination, which can adversely impact resilience and psychological well-being. In addition, deaf individuals experience higher rates of intimate partner violence, poly-victimization, sexual, physical, and emotional abuse, and unemployment. These negative life experiences can sometimes be accompanied by maladaptive behaviors, such as substance use. Resilience and a positive sense of well-being can help to mitigate adverse life events. This survey research utilizes a sample of 206 deaf participants, whose primary language is ASL, and hearing participants to examine the relationships between negative life experiences, substance use, resilience, and well-being. Findings indicate: 1) deaf participants reported experiencing several negative life events significantly more often than their hearing counterparts, specifically being sent to jail or prison, having a serious physical illness, and sexual abuse by a partner than hearing participants; 2) deaf participants reported more experiences of having an abortion or miscarriage and parental separation or divorce as children than their hearing counterparts; 3) deaf individuals reported higher marijuana use than their hearing counterparts, but less use of stimulants, inhalants, and prescription drug abuse; 4) experiences of mental illness was significantly associated with resilience and well-being; and 5) deaf and hearing participants had similar scores in resilience and well-being. The author identifies strengths and limitations of the study and discusses implications for future research.

Keywords: Deaf, Negative life experiences, Substance use, Resilience

Introduction

The concepts of happiness, well-being, and resilience are linked to positive outcomes in physical and mental health. Happiness and well-being contribute to supportive functioning across multiple life domains, such as physical health, social relationships, positive work life, and marriage (Yildirim & Belen, 2019). However, negative life events and stressors can cause feelings of well-being and happiness to wane. Individuals with developed skills in adaptability, adjustment, and resilience have a greater likelihood to effectively cope with stressful or adverse life events and return to previous levels of well-being and happiness (Yildirim & Belen, 2019).

Resilience plays an important role in not only dealing with adversity, but also in establishing and maintaining stability in well-being and happiness. The following literature review includes sections defining subjective well-being, resilience, and negative life experiences. Sections about these constructs among deaf individuals as well as studies of negative life events follow.

Well-being is a subjective experience when individuals perceive their lives as going well. Factors, such as housing, employment, interconnectedness, and skills in resilience and coping, can positively impact one's sense of well-being. Well-being is the presence of positive emotions and moods, the absence of negative emotions, satisfaction with life, fulfillment, and positive functioning (Centers for Disease Control, 2021). There are many aspects of well-being, including: physical, economic, social, developmental, emotional, and psychological. A sense of well-being does not occur because of an absence of negative life experiences. Rather, experiences can affect individuals in unknown, unexpected, or negative ways; they are a part of being alive. A key factor in improving interpersonal well-being is to develop ways of mitigating the effects of adverse life events.

Negative life experiences are connected to a number of negative adult health outcomes, including a higher likelihood of substance use disorders and psychiatric disorders (Iacoviello & Charney, 2020; McKenzie & Reed, 2017). Trauma, especially childhood trauma, is associated with developing substance use disorders later in adulthood (Goodman, 2017). The most severe manifestations of trauma and negative life experiences are post-traumatic stress disorder (PTSD), depressive disorders, substance use disorders, and suicide (Embree, et al., 2017; Iacoviello & Charney, 2020). Negative life experiences, especially traumatic events, can have life-long residual effects on individuals unless they learn how to cope with them. Individuals who have developed positive mechanisms for coping (e.g., resilience) can mitigate the negative effects of adverse life events, thereby potentially reducing the need to use substances or other maladaptive coping strategies. Resilience skills are a key component to developing a sense of well-being.

Resilience is an interpersonal process of adaptation to stressful experiences and adversity (Mackenzie, et al., 2018). Resilient individuals have developed a set of adaptive characteristics that help them cope with and recover from stress and trauma (Iacoviello & Charney, 2020). There are a number of factors that contribute to the development of resilience (Harms, et al., 2016; Iacoviello & Charney, 2020). Psychosocial factors include flexible and adaptive cognitive and behavioral strategies that allow individuals to develop patterns of thinking and behaving that reduce the impact of negative life experiences, increase resilience, and enhance psychological well-being. Individual attributes, such as personal competence, tolerance of negative emotions, acceptance of change, secure relationships, sense of control, and spiritual influences, can promote resilience and well-being.

Resilience and individual well-being are related constructs, both of which aid individuals in reducing the harmful effects of negative life experiences (Harms, et al., 2018; Satici, 2016). While resilience is a trait described as "bouncing back," it is also considered an imperative for psychological well-being. An individual who faces adversity has the capacity to develop resilience, create meaning of experiences, and enhance well-being. A

positive sense of well-being can be an antecedent to resilience and vice versa (Harms, et al., 2016). Positive emotions can facilitate adaptive coping and promote greater resilience through flexible thinking and behavioral adaptations. Well-being is associated with positive physical and mental health, social connectedness, productivity, and longevity (Centers for Disease Control, 2021). It is also associated with a number of positive outcomes, such as employment, socioeconomic stability, and family satisfaction. In general, resilience and well-being can be supported with good physical and mental health, positive social relationships, and access to basic resources, such as shelter and income.

Well-being, resilience, and negative life experiences are subjective; individuals from diverse groups will define and manifest these concepts in different ways. Members of diverse groups will interpret these terms through their own cultural frameworks. Similarly, deaf individuals, especially those who identify as members of a Deaf cultural group (signified with a capitalized letter D), may have unique life experiences that include attendance at residential schools for deaf children, participation in Deaf cultural activities (e.g., Deaf clubs, Deaf organizations, Deaf sporting events), socialization with other Deaf individuals, and adherence to Deaf cultural norms and mores (Siple, Greer, & Holcomb, 2021). However, deaf and hard of hearing individuals comprise a heterogenous group of individuals, some of whom may identify with cultural membership while others may not, the use of lowercase "d" will be used to be inclusive of different types of deaf and hard of hearing people whose primary language is ASL.

Well-Being and Resilience among Deaf Individuals

Deaf individuals who use ASL as their primary language face multiple barriers that can impact well-being and resilience (Brice & Adams, 2011; Crowe, 2019a; Johnson, et al., 2018; Sheridan, 2001). They often experience discrimination and prejudice that prevent access to employment, housing, medical and mental health care, and community opportunities. Frequently they face micro-aggressions in society, such as audism, which give preference to the spoken word over visual/manual communication. When deaf individuals are part of a supportive social community, they report feelings of well-being (Brice & Adams, 2011; Crowe, 2019a). Psychosocial factors, such as having effective communication with family members and employers, positive relationships with friends, family, and coworkers, and adequate income, promote resilience and well-being in deaf people (Crowe, 2019a; Johnson, et al., 2018). Individual attributes, such as flexibility, autonomy, empathy, motivation, and a positive deaf identity can also promote resilience and enhance well-being (Brice & Adams, 2011; Johnson, et al., 2018; Sheridan, 2001). Access to information, services, and knowledge can provide a foundation upon which to build resilience. Deaf individuals who have communication access can learn about healthy behaviors, protective practices, personal and legal rights, and social accountability (Johnson, et al., 2018).

Negative Life Experiences and Substance Use among Deaf Individuals

Deaf individuals are more than twice more likely to experience trauma and negative life experiences than hearing individuals (Johnson, et al., 2018). These experiences include higher rates of child neglect and abuse, PTSD,

interpersonal trauma, polyvictimization, and intimate partner violence. They often experience worse psychological and physical health outcomes compared to their hearing peers (Anderson, et al., 2018; Mousley & Chaudoir, 2018). Some deaf individuals, as a result of language deprivation as children, have a lack of agency and knowledge about health and mental health issues (Johnson, et al., 2018). These experiences of language deprivation can interfere with the development of resilience, coping skills, and well-being.

In addition to acts of social discrimination, prejudice, oppression, and marginalization perpetuated against them, there are other deaf-related experiences that can adversely affect their lives (Crowe, 2019a; Johnson, et al., 2018; Mousley & Chaudoir, 2018). Many deaf individuals experience audism which refers to societal beliefs that being deaf is a physical handicap that needs to be fixed in order to live a happy and rewarding life (Johnson, et al., 2018). Many also experience linguisticism, which refers to a feeling of cultural superiority of spoken language over a signed language. Within the deaf community, some deaf people experience a phenomenon known as "crab theory," which refers to the phenomenon of some deaf people who criticize or "pull down" the successes or achievements of other deaf people (Gallaudet University, 2020). This can take the form of malicious and negative gossip, grudges, or social rejection. In families, deaf individuals often have family members who cannot use ASL for communication. Childhood experiences in families where communication is absent or limited can create feelings of frustration, anger, and disappointment that linger throughout adulthood.

Deaf people who have negative life experiences related to access to communication accommodations and services, they may also struggle with positive identity development, resilience, and well-being. Stigma about impairment devalue deaf individuals and can create a cascade of negative life experiences (Mousley & Chaudoir, 2018). Systemic oppression contributes toward the erosion of well-being and resilience. As a result, this oppression can become internalized and part of the development of maladaptive ways of coping, such as substance use.

Studies of substance use among deaf individuals suggest rates that are similar to hearing populations (Anderson, et al., 2018; Crowe, 2019b; Kushalnagar, et al., 2019). Some deaf individuals, along with their hearing counterparts, use substances to deal with negative life experiences, trauma, and physical and mental health problems (Crowe, 2019b; Anderson, et al., 2018). Societal barriers can add burdens on the lives of deaf individuals, which can lead to substance use as a maladaptive coping strategy. Lack of deaf community support can contribute to poorer mental health outcomes and substance use. Mental health problems in combination with substance use among deaf individuals increase the likelihood of suicide attempts (Embree, et al., 2017).

Overall, deaf populations are understudied compared to their hearing counterparts, which presents another form of social exclusion. Specifically, studies of negative life experiences, substance use, resilience, and well-being among deaf adults are lacking. Research involving deaf participants optimally involves investigators who are culturally knowledgeable and linguistically fluent in ASL. The purpose of this study is to investigate the concepts of well-being, resilience, negative life events, and substance use among deaf individuals who self-report using

ASL as their primary language as compared to hearing individuals. In that spirit, the following research questions guide this study:

1. Is there a significant difference between deaf and hearing participants on a measure of well-being?
2. Is there a significant difference between deaf and hearing participants on a measure of resilience?
3. Is there a significant difference in substance use between deaf and hearing participants?
4. Is there a significant difference in the frequency of negative life events between deaf and hearing participants?

Method

After IRB approval, the researcher employed a non-random sampling strategy to recruit participants. Information about the study was posted on social media outlets and sent through deaf-related list-servs. For those who received emails, a brief message explained that the purpose of the study was to understand their life experiences among deaf individuals who use ASL as their primary language (note: Deaf cultural membership was not required nor self-reported by participants) and among hearing individuals.

The email contained a Survey Monkey link to the questionnaire. Potential participants were allowed to include other known individuals who may be interested in the study by forwarding the link to the study. This link directed participants to a secure and anonymous online questionnaire that took approximately 10 minutes to complete. Data were analyzed using SPSS, version 26, to calculate inferential statistics, such as analysis of variance, the Mann-Whitney U test, and multiple regression.

Participants

The sample included 206 adults, including 146 women (70.9% of the sample), 53 men, and seven participants who declined to answer. Sixty-nine participants were deaf (33.5% of the sample); one hundred thirty-seven were hearing (66.5%). The majority of the participants were between the ages of 18 - 24 ($n = 95$, 46.1% of the sample), followed by 25 - 34 years ($n = 51$, 24.8%), 45 – 54 ($n = 21$, 10.2%), 35 – 44 ($n = 19$, 9.2%), 55 – 64 ($n = 11$, 5.3%), and 65 years and older ($n = 2$, 1.0%). The majority of the participants reported their race/ethnicity as white or Caucasian ($n = 150$, 72.8%), Hispanic or Latino ($n = 15$, 7.3%), Black or African American ($n = 14$, 6.8%), American Indian or Alaska Native ($n = 1$, 0.5%), Native Hawaiian or other Pacific Islander ($n = 1$, 0.5%), another race/ethnic group or biracial ($n = 10$, 4.9%), and two participants who did not answer.

Measures

The measures used for this study were originally written for adults whose primary language is English. The Flesch-Kincaid grade level of the entire instrument is grade 6.4. For individual subscales, the Flesch-Kincaid

grade levels are indicated along with Cronbach's alphas, which measures statistical reliability. Average reading levels for the American general population is approximately 7th to 8th grade (Wylie Communications, 2021).

Demographic Variables

Demographic variables, such as race, gender, and age were collected to describe the characteristics of the sample and because of their association in the literature with well-being, resilience, and negative life events (Abajobir, et al., 2017; Anderson, et al., 2018; Crowe, 2019a; Crowe, 2019b; Embree, et al., 2017; Iacoviello & Charney, 2020; Kushalnagar, et al., 2019; McKenzie & Reed, 2017; Wakeland, et al., 2017; Ziggi, et al., 2020). The Flesch-Kincaid grade level for the demographic questions is grade 3.4.

Well-Being/Happiness

Well-being (i.e., happiness) was measured using one-item, "Right now, how happy do you feel?" (Abdel-Khalek, 2005). The item from this happiness instrument was chosen because of its readability for deaf participants and because there are high positive correlations between happiness and subjective well-being (Medvedev & Landhuis, 2018). Though there is a trend in using multi-dimensional instruments to measure well-being and happiness, historically single-item scales have been used and can still be psychometrically sound substitutes for multi-item counterparts (Angulo-Brunet, et al., 2020; Moldovan, 2017; Ruggeri et al., 2020). In addition, single-item happiness rating scales have been shown to be psychometrically sound and more convenient, (Moldovan, 2017). The original version included an 11-point anchor, but this version was administered using a 9-point anchor to be consistent with other questions in the instrument.

The categories were collapsed to indicate moderate levels of unhappiness and happiness. This question is answered using a Likert scale response ranging from (1) extremely unhappy to (9) extremely happy. Higher scores indicate higher levels of well-being. This item was chosen because of its frequent use in well-being studies and because of its perceived understandability with the sample under study (i.e., readability) (Abdel-Khalek, 2005, 2008, 2011; Abdel-Khalek & Lester, 2012). In addition, this item has comparable validity with the Oxford Happiness Inventory (Abdel-Khalek, 2005); the single-item administration helped to keep the instrument with as few items as possible to increase response rate. The Flesch-Kincaid readability is grade is 3.6.

Resilience

Resilience was used using a single-item measure from the Brief Resilience Scale (Smith, et al., 2008). This scale was chosen because it is a simple, self-assessment tool with good reliability in other studies with multi-lingual populations (Chmitorz, et al., 2018; Rodriguez-Rey, et al., 2016; Smith et al., 2008). The original version of this scale is a six-item self-report questionnaire designed to measure resilience or the ability to recover after a stressful or distressing event. A single item was chosen because to reduce the total items for the instrument as well as for

its readability for deaf participants (i.e., it is the only item on the scale that is written in a direct positive statement rather than negative statement, such as "it is hard for me to snap back"). The single-item measure for this study was "I tend to bounce back quickly after hard times" and was rated by participants on a Likert Scale ranging from (1) strongly disagree to 5 (strongly agree). Cronbach's alpha using the long- and short- forms of the BRS ranged from .80 to .91. Higher scores indicating higher resilience (Smith, et al., 2008). The Flesch-Kincaid readability for this item was 3.2.

Substance Use

This scale was as part of the National Survey on Drug Use and Health (SAMHSA, 2015). Substance use was measured by asking participants the frequency of use of 10 types of substances within the past year, including alcohol, marijuana, stimulants, prescription drugs, opioids, poppers, synthetic drugs, hallucinogens, inhalants, and dissociate drugs. Responses were in a Likert scale ranging from (0) never used to (4) used frequently, one or more times per day. The Cronbach's alpha for this scale was .66. The Flesch-Kincaid readability level was grade 7.9 probably because of the slang words used to describe certain substances (e.g., flakka, methamphetamine, and oxycontin).

Negative Life Events

Negative life events were measured by the Stressful Life Events Screen Questionnaire (SLESQ; Goodman, et al., 1998). This instrument was selected because of its frequent use in studies and high reliability (Goodman, 1998; Gray, et al., 2004; Hooper, et al., 2011). In the original version, the SLESQ is a 13-item self-report measure for non-treatment seeking samples that assesses lifetime exposure to traumatic events. Eleven specific and two general categories of events, such as a life-threatening accident, physical and sexual abuse, witness to another person being killed or assaulted, are examined.

In the modified version for this study, rather than responses in yes/no and open-ended comments, participants were asked to indicate on a Likert scale whether they had no experiences of the event or a choice of: experienced the event and tried to get help from family or friends; experienced the event and tried to get help from a professional; experienced the event, but did not seek help. Cronbach's alpha for this administration was .722, which is comparable to Goodman, et al.'s (1998) findings. The Flesch-Kincaid readability was grade 5.2.

Results

Demographic Variables

There were no significant differences in race, gender, and age on the dependent variables.

Resilience and Well-being

There is a significant positive relationship between scores on the Brief Resilience Scale and Well-being (r = .20, p = .01).

Well-Being and Resilience by Hearing Status

A one-way ANOVA was conducted to compare differences on well-being and resilience between deaf and hearing participants; there were no significant differences between groups (F = 2.01, 1, 204, p = .16). The majority of participants used at least one to four substances within the past year (n = 174, 84.47%); twenty-four participants (11.7%) reported no substance use at all.

Substance Use by Hearing Status

A one-way ANOVA indicated significant differences in substance use mean scores by hearing status (deaf vs. hearing) ($F = 9.59$, 1, 203, $p < .0001$). Bonferroni post-hoc analyses indicated:

- There were significant differences in marijuana use between groups ($p = .033$). Deaf and hard of hearing individuals reported higher marijuana use ($M = 1.38$, $SD = 1.68$) compared to hearing individuals ($M = .88$, $SD = 1.36$, ES = .010).
- There were significant differences in the use of stimulants between groups ($p = .009$). Hearing individuals reported more frequent use of stimulants ($M = .10$, $SD = .35$) than deaf individuals ($M = .01$, $SD = .12$, ES = .020).
- There were significant differences in the abuse of prescription drugs between groups ($p = .04$). Hearing individuals reported more frequent abuse of prescription drugs ($M = .47$, $SD = .99$) than deaf individuals ($M = .25$, $SD = .53$, ES = .005).
- There were significant differences in the abuse of inhalants between groups ($p = .05$). Hearing individuals report higher frequency of using inhalants ($M = .03$, $SD = .17$, ES = .010) compared to deaf individuals (none reported use of inhalants).

Negative Life Events by Hearing Status

A Mann-Whitney U test is a non-parametric test that is used when dependent variables are not normally distributed. This test does not require that assumptions for normal distribution be met. A Mann-Whitney U test was conducted to examine differences between deaf participants and hearing participants on experiences of specific negative life events. Deaf respondents reported the following experiences significantly more often than their hearing counterparts:

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- Being sent to prison or jail ($p = .032$).
- Having a serious physical illness ($p = .013$).
- Being sexually abused by a partner ($p = .049$).
- Having an abortion or miscarriage ($p = .066$).
- Living with parents who separated or divorced ($p = .092$).

Table 1. Frequency Counts of Negative Life Events by Hearing Status

Event	Never Experienced % of sample (n)	Experienced and Sought Professional Help % of sample (n)	Experienced and Sought Help from Family or Friends % of sample (n)	Experienced, But Did Not Seek Help From Anyone % of sample (n)
Natural or	75.2 (103)*	2.2 (3)	5.8 (8)	16.1 (22)
Manmade Disaster	*71.0 (49)**	*7.2 (5)*	*13.0 (9)*	*8.7 (6)*
Serious Accident or	59.1 (81)	15.3 (21)	13.1 (18)	11.7 (16)
Accident-Related	*47.8 (33)*	*20.3 (14)*	*23.2 (16)*	*8.7 (6)*
Injury				
Sent to Jail or	98.5 (135)	0 (0)	0.7 (1)	0.7 (1)
Prison	*92.8 (64)*	*1.4 (1)*	*4.3(3)*	*1.4 (1)*
Close Family	78.1 (107)	5.1 (7)	5.1 (7)	11.7 (16)
Member Sent to	*68.1 (47)*	*5.8 (4)*	*11.6 (8)*	*14.5 (10)*
Jail or Prison				
Foster Care or	92.0 (126)	1.5 (2)	1.5 (2)	4.4 (6)
Given Up for	*88.4 (61)*	*5.8 (4)*	*2.9 (2)*	*1.4 (1)*
Adoption				
Parents Separated	65.0 (89)	7.3 (10)	2.2 (3)	25.5 (35)
or Divorced While	*52.2 (36)*	*4.3 (3)*	*11.6 (8)*	*31.9 (22)*
You Lived with				
Them				
Experienced Your	86.9 (119)	2.9 (4)	3.6 (5)	6.6 (9)
Own Separation or	*91.3 (63)*	*2.9 (2)*	*5.8 (4)*	*0 (0)*
Divorce				
Serious Money	54.0 (74)	5.8 (8)	22.6 (31)	17.5 (24)
Problems	*36.2 (25)*	*17.4 (12)*	*30.4 (21)*	*15.9 (11)*
Serious Physical	75.2 (103)	15.3 (21)	6.6 (9)	2.9 (4)
Illness	*59.4 (41)*	*18.8 (13)*	*15.9 (11)*	*5.8 (4)*
Serious Mental	43.8 (60)	35.8 (49)	4.4 (6)	16.1 (22)
Health Problem	*42.0 (29)*	*27.5 (19)*	*13.0 (9)*	*17.4 (12)*
Emotional Abuse	62.8 (86)	9.5 (13)	2.2 (3)	25.5 (35)
by Partner	*59.4 (41)*	*4.3 (3)*	*18.8 (13)*	*17.4 (12)*

Event	Never Experienced % of sample (n)	Experienced and Sought Professional Help % of sample (n)	Experienced and Sought Help from Family or Friends % of sample (n)	Experienced, But Did Not Seek Help From Anyone % of sample (n)
Emotional Abuse by Parent or Caregiver	54.7 (75)	13.1 (18)	3.6 (5)	28.5 (39)
	62.3 (43)	*5.8 (4)*	*8.7 (6)*	*23.2 (16)*
Physical Abuse by Partner	81.8 (112)	4.4 (6)	0.7 (1)	12.4 (17)
	75.4 (52)	*4.3 (3)*	*7.2 (5)*	*11.6 (8)*
Physical Abuse by Parent or Caregiver	75.9 (104)	5.1 (7)	1.5 (2)	17.5 (24)
	76.8 (53)	*5.8 (4)*	*4.3 (3)*	*13.0 (9)*
Sexual Abuse by Partner	81.0 (111)	2.2 (3)	1.5 (2)	15.3 (21)
	68.1 (47)	*5.8 (4)*	*2.9 (2)*	*23.2 (16)*
Sexual Abuse as a Child by Parent, Caregiver, Family Member	79.6 (109)	6.6 (9)	0.7 (1)	12.1 (18)
	81.2 (56)	*5.8 (4)*	*1.4 (1)*	*10.1 (7)*
Witnessed Physical Abuse or Violence Between Parents	70.1 (96)	4.4 (6)	4.4 (6)	21.2 (29)
	56.5 (39)	*7.2 (5)*	*15.9 (11)*	*20.3 (14)*
Abortion or Miscarriage	88.3 (121)	1.5 (2)	2.2 (3)	8.0 (11)
	78.3 (54)	*5.8 (4)*	*2.9 (2)*	*13.0 (9)*
Someone Close Died Unexpectedly	43.1 (59)	10.2 (14)	19.0 (26)	27.7 (38)
	36.2 (25)	*13.0 (9)*	*27.5 (19)*	*23.2 (16)*
Been Robbed, Mugged, or Physically Attacked by Stranger	84.7 (116)	0.7 (1)	2.9 (4)	11.7 (16)
	81.2 (56)	*4.3 (3)*	*4.3 (3)*	*10.1 (7)*
Sexual Harassment at Work or School	66.4 (91)	2.2 (3)	4.4 (6)	27.0 (37)
	66.7 (46)	*2.9 (2)*	*13.0 (9)*	*17.4 (12)*

*Sample of hearing participants (N = 137)

***Sample of deaf participants* (underlined and bold) (N = 69)

Post Hoc Analysis: Factors Related to Well-Being and Resilience

Post-hoc analyses were conducted to examine variables that were outside the original research questions and any relationship to the dependent variables, well-being and resilience. One negative life experience, having a mental

illness, emerged as a significant predictor of well-being. A multiple regression was used to examine associations of mental illness and resilience. Out of the list of all negative experiences, only one independent variable, experiences of mental illness, was significantly associated with well-being (r = -.23, *p* = .001). and resilience (*r* = -.20, p = .004). There were no significant differences in experiences of mental illness between deaf and hearing participants.

Discussion

Summary of Findings

Overall, the main findings of the study indicated that there were significant differences between deaf and hearing participants on a few variables:

- Deaf participants had a higher marijuana use, but less use of other substances than hearing participants;
- Deaf participants had a higher frequency of being sent to jail or prison, having a serious physical illness, and sexual abuse by a partner than hearing participants;
- Deaf participants had more frequent abortions or miscarriages than hearing participants;
- Deaf participants had more frequent parental separation or divorce during childhood than hearing participants.
- In both hearing and deaf participants, experience of mental illness was a significant predictor of lower well-being and lower resilience.

The following section presents a discussion of the results as they relate to the research questions guiding this study.

Are there significant differences between deaf and hearing participants on measures of well-being and resilience?

There were no significant differences between deaf and hearing participants on either resilience and well-being. Despite experiences of societal prejudice, marginalization, and oppression by many deaf individuals (Crowe, 2019a; Johnson, et al., 2018; Mousley & Chaudoir, 2018), they did not report lower resilience or well-being. One possible explanation for this may be that as legislation for individuals with disabilities has progressed and requirements for accessibility are expected, deaf individuals may have more opportunities for visibility and accessibility (Wardle, 2017). Increased awareness and advocacy, captioning services, social media presence, access to online education, and other such efforts may help individuals who have historically experienced marginalization to learn adaptive strategies and coping skills to overcome these negative life experiences (Kimball, et al., 2016; Wardle, 2017). With increased availability of resources for parents of children with disabilities, advocacy skills may have been socialized early in life by parental role models (Brice & Adams, 2011; Kimball, et al., 2016; Sheridan, 2001, 2008). These skills can be incorporated in contemporary pedagogy and social opportunities and include strategies of reducing stigma through education and collective action experiences.

Is there a significant difference in substance use between deaf and hearing participants?

Deaf individuals reported higher marijuana use than their hearing counterparts, but less use of stimulants, inhalants, and prescription drug abuse. Studies of alcohol and substance use report similar rates to hearing counterparts (Anderson, et al., 2018; Crowe, 2019b; Guthmann & Kolvitz, 2021; Kushalnagar, et al., 2019). Deaf and hard of hearing individuals report being regular marijuana and heavy alcohol users more frequently than hearing individuals (Anderson, et al., 2018). Another possible explanation is that the deaf participants in this sample reported higher levels of well-being and resilience, thereby reducing the need for use of "harder" drugs. The specific reasons for deaf respondents using only marijuana more frequently than other substances are unclear.

Is there a significant difference in the frequency of negative life events between deaf and hearing participants?

Deaf participants reported experiencing several negative life events significant more often than their hearing counterparts, specifically being sent to jail or prison, having a serious physical illness, and sexual abuse by a partner disproportionately higher than hearing participants. There are several issues that can compound a deaf individual's situation when the individual comes into contact with the criminal justice system. There are significant communication barriers that a deaf offender can face. There may be translation difficulties, problems with English literacy, and lack of professional knowledge and understanding of these issues (Wakeland, et al., 2019). Criminal justice and law enforcement professionals may have false assumptions about a deaf offender's communication ability. They can misunderstand the deaf person's needs or misinterpret gestural behavior as aggressive or sexual acts.

The finding that deaf individuals have a higher frequency of physical illnesses than their hearing counterparts is supported by other literature. Deaf children have a higher prevalence of additional physical disabilities (Abrams, 2017; Dammeyer & Chapman, 2017). Research findings suggest that there is a higher proportion of neurodegenerative and neurological disorders in the deaf population compared to the general population (Crump & Hamerdinger, 2017; Fellinger, et al., 2012; Mohamed, et al., 2019). Genetic syndromes as well as underlying neurological issues can lead to problems with cognitive processes and language expression. In addition, deaf adults are at greater risk of both physical and mental disorders (Dammeyer & Chapman, 2017; Diaz, et al., 2013; Fellinger, et al., 2012).

The finding that deaf individuals experience sexual abuse more often than their hearing counterparts is also supported by the literature (Anderson, et al., 2018; Johnson, et al., 2018; Mousley & Chaudoir, 2018; Wakeland, et al., 2017). Other factors, such as witnessing violence, intimate partner physical and emotional violence, childhood neglect, physical abuse, and emotional abuse are associated with lower resilience and lower levels of well-being in other studies of deaf individuals (Abajobir, et al., 2017; Anderson, et al., 2018; Mousley & Chaudoir, 2018; Wakeland, et al., 2017); however, this study only found sexual abuse to be a significant factor. The reasons for this are unclear and need further follow-up.

Though exploratory and interpreted with caution, deaf participants reported more experiences of an abortion or miscarriage and childhood parental separation or divorce than their hearing counterparts. The reasons for this are unclear. Studies of abortions among deaf individuals are absent from the literature. However, the finding of deaf participants experiencing parental separation or divorce in childhood is supported by the literature. The birth of a child with disabilities can be stressful and impact the marital and family relationships (Chowdhury, 2018; Perlowski & Wright, 2019; Shahrier, et al., 2016). Diagnosis, severity of the disorder, parental coping strategies, resources, and community support can impact the degree to which a marriage can be sustained. Parents who have children with disabilities report higher levels of stress, anxiety, and depression (Shahrier, et al., 2016).

Experiences of mental illness was significantly associated with resilience and well-being. The greater the impact of mental illness, the less resilience and well-being. These findings are well-supported in the literature (Crowe, Averett, & Glass, 2016; Machado, 2019; Ziggi et al., 2020). Increased symptomology of mental illness is associated with higher levels of stress, anxiety, difficulty functioning, lower resilience, and lower levels of well-being. Because deaf and hearing participants reported similar rates of well-being and resilience, this particular finding applies to both groups in that higher distress related to mental health led to lower levels of resilience and well-being.

Strengths and Limitations

This study contributes to the inclusion of diverse groups by including findings of deaf individuals in the literature. A strength of the study was the ability to compare results for both deaf and hearing individuals, which can be sometimes difficult to obtain. The study was implemented by researchers who were knowledgeable of deaf culture and fluent in ASL, which helps, in particular, to apply findings in a meaningful and practical way.

The demographic diversity in terms of race and ethnic group did not reflect the population proportions. Specifically, members of diverse race and ethnic groups were underrepresented. In addition, the sample sizes of deaf and hard of hearing participants compared to hearing participants were not balanced. A stratified sampling strategy is recommended to ensure proportionate samples of diverse participants as well as deaf and hearing individuals.

Results should be interpreted with caution because of the potential impact of the instruments that were used to measure constructs. Though Cronbach's alphas were used to measure internal consistency, other forms of reliability, such as split-half and inter-rater, were not evaluated. Single-item scales, in general, may have problems with content validity, sensitivity, and lack of a measure of internal consistency. Thus, the single-item scales used in this study may lack the ability to fully represent the constructs of well-being (happiness) and resilience.

In particular, written instruments that were designed for individuals whose first language is English may not be conceptually or linguistically equivalent with deaf individuals, particularly those whose first language is ASL. As

with instruments that are designed for individuals in one language and administered to individuals who use another language, questions of validity may arise. Therefore, it is important for researchers and practitioners to understand the limitation of the validity and reliability estimates for the instruments.

Implications for Future Research and Practice

In order to adequately represent members of diverse racial and ethnic groups, specific recruitment strategies to encourage participation should be employed. Recruitment strategies can include seeking diverse deaf participants through nationally recognized professional organizations, such as the National Black Deaf Advocates (NBDA), National Hispanic Latino Association of the Deaf (NHLAD), National Asian Deaf Congress (NADC), and Asian Pacific Islander Association (APIA). The underrepresentation of members of diverse groups limits the generalizability of findings and has implications for the validity of any study design. Understanding an individual's experiences using a lens that includes cultural diversity and cultural humility is especially important in professional practice. As researchers and practitioners strive to be culturally competent, they must allow diverse clients to explore and frame their own narratives rather than apply the findings of any particular study onto their experiences.

This study found that sexual abuse, as opposed to physical, psychological, or financial abuse, was a significantly higher for deaf individuals than their hearing counterparts; these findings differ from other studies of deaf individuals. Though the reasons for this are unclear, ensuring that there are proportionate representatives of groups may allow more thorough analysis in neglect and abuse experiences. Abuse in particular sub-groups of the deaf community were not studied specifically; yet it may be more prevalent in particular sub-groups within the deaf community (e.g., deafblind individuals, LGBTQ+ individuals, individuals who have more profound deafness). Researchers can delve deeper into the experiences of deaf individuals in sub-groups to better understand the protective and risk factors that are unique to a particular group. In addition, this study found there to be more deaf individuals who experienced an abortion or miscarriage than their hearing counterparts. There are no current studies that specifically address this; future research should include this variable. Finally, marijuana use was significantly higher for deaf participants. The reasons for this are unclear and may be a result of the increasing legalization of marijuana use for medical and recreational purposes. This finding does not necessarily point to a higher prevalence of substance abuse disorders in the deaf community. Rather, more substance-specific studies may be helpful to better understand particular substance use in the deaf community. For practitioners, understanding the frequency, duration, and reasons for using substances are an important part of substance use assessment and treatment. There are many areas for further research into substance use by deaf individuals. Studies of prevalence, risk factors, communication accessibility, and treatment of substance use are lacking and could greatly improve assessment and treatment of deaf people (Guthmann & Kolvitz, 2021). Similarly, there are very few studies of deaf people who are incarcerated, even though many incarcerated individuals have substance abuse issues that can co-occur with mental health issues (Guthmann & Kolvitz, 2021).

Compliance with Ethical Standards

Study design was approved by the Institutional Review Board at Gallaudet University prior to data collection. Subjects' participation was obtained with informed consent. The author has no conflicts of interest to disclose.

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A New Way to Study Biochemistry Words by Using Games

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Abstract: Games are highly appreciated by the population, so due to the Covid19 pandemic confinement we decided to carry out an Internet research of several games, in order to use them for the assimilation of new words of Biochemical students. Games found in puzzle books allow the stimulation of memory, reasoning and other brain capacities, such as keeping us out of stress and improving our knowledge. For this reason, we thought that they could be interesting for relieving students of the stress of confinement, and at the same time allowing to learn Biochemical words with those games. Games found in puzzle books are based on two types of problems, based in numbers or in letters. Among the games based in numbers, the most frequent include sudokus, suzenjou, kakuros, arithmograms; while those based in letters include crosswords, self-defined, and games of words or letters. We decided to perform various puzzles based on letters, and the easiest to implement were those based on words and syllables games. The simplest word games are based on searching within a set of words, those that have some part in common. In this sense, we invented rhyming games, in which words ended in –ine (frequent ending of amino acids, nitrogenous bases, nucleosides and some proteins), in –ose (frequent ending in carbohydrates), or in - ic / –ate (frequent termination of fatty acids and other intermediate acids of metabolism, or of their corresponding salts). Thus, the students were able to observe these characteristics in the nomenclature. On the other hand, incomplete word games allow you to fill in the names of the metabolites using groups of letters to choose from. Our proposal includes various word games that we can apply to the Biochemistry course so that students remember them.

Keywords: Education, Gamifications, Biochemistry

Introduction

Puzzles or brain teasers are highly appreciated by the majority of the population because they allow learning

without an active study and enjoying when incorporating knowledge. This effect produces an effective learning without a high effort. In addition, games provide several benefits to those who play them, as they allow a temporary escape from the daily problems and can improve psychological and stress problems. These benefits come from the satisfaction of solving a problem that initially seemed too difficult to solve. During the quarantine it was of great importance, therefore, to keep out the head from worrying due to personal problems and to entertain in other aspects of live. For this reason, there were numerous web pages that provided us with various activities to carry out (visits to museums, songs, books, recorded plays and films), and in particular, pages that provided us with new puzzles for individual or dual entertainment (Broncano, 2020), that could be carried out after printing the games and without using a computer, which was one of the most valued electro domestic used at home by all the inhabitants. By age and sex, games are usually more appreciated by men than by women, and younger people play much more than older people. For this reason, the application of puzzles to Biochemistry may be much appropriated due to the age of our students, despite that in the Chemistry degree there are a majority of women.

Puzzles games found on the Internet can be classified into two large groups. On one hand, those that are based on numbers and allow learning mathematics (sudokus, number tables, games for addition or subtraction, ...), and on the other hand, those that are based on letters and are widely used in studies of grammar, and also in language learning. In a subject like Biochemistry, which requires the student to know a number of words, we thought that number games were not very useful. Although some numerical problems can also be solved in Biochemistry, it is not easy to think on games with results obtained from a problem. So, we focused on letter-based games. In order to use this kind of games for Biochemistry words, the members of our teaching innovation group (Quimet, Metabolisme en Química, GINDO-UB180) prepared several games for these students. These games were proposed as a continuous study tasks for the students of the Biochemistry subject in the Chemistry Degree during the confinement (spring semesters of the course 2019 to 2020, and autumn semester of the course 2020 to 2021). In fact, Chemistry Degree at the University of Barcelona is taught in a double semester mode, so that the students can take all the subjects of the Degree in any of the semesters.

First at all, we look for the most important words found in the appendices of some Biochemistry books in order to have a list of the most commonly used words (Nelson and Cox, 2006; Stryer, 1995). We selected those words and compared the relation between the letters that they contain. Afterwards, we carried out a search through grammar games for children and games for learning languages on Internet, and finally we tried to adapt them by preparing several Biochemistry games based on the ones we had found. The aim of this paper is to present examples of the words' games we proposed to our students during the Covid19 confinement, although those games can be also used also actually for the self-study of Biochemistry.

Method

Summary of the Biochemistry Words found

Biochemistry words were separated in groups, which presented several relations between their letters. Although not all, most of the carbohydrates or derivatives ended in the three letters –ose (arabinose, erythrose, fructose, galactose, glucose, mannose, ribose, ribulose, sedoheptulose, sorbose, triose, xylose, xylulose, aldose, amylose, hexose, ketose, lactose, maltose, maltotriose, pentose, sucrose, tetrose). Most of the amino acids finish in –ine (alanine, arginine, asparagine, cysteine, phenylalanine, glycine, glutamine, histidine, isoleucine, leucine, lysine, methionine, proline, tyrosine, threonine, serine, valine), as well as other nitrogen compounds, such as bases and nucleosides (adenine, adenosine, cytidine, cytosine, deoxyadenosine, deoxycytidine, deoxyguanosine, deoxyinosine, deoxythymidine, guanosine, inosine, thymidine, uridine). Enzymes finish in –ase (acyltransferase, aconitase, adenylate cyclase, aminotransferase, arginase, carboxylase, ceramidase, colipase, desaturase, dehydrogenase, diastase, elastase, elongase, endonuclease, endopeptidase, phosphodiesterase, phosphofructokinase, phosphoglucomutase, phosphorylase, phosphoribosylmutase, hexokinase, protease, thiolase, transferase, translocase). Finally, lipids, acids and other intermediate end in –ic or in –ate, depending on the acid or salt form (arachidonic, behenic, caproic, stearic, lauric, linoleic, margaric, myristic, nervonic, oleic, palmitic, palmitoleic, prostanoic, ascorbic, citric, folic, fumaric, isocitric, lactic, malic, malonic, phenylacetic, pyruvic, succinic). Those words and other ones were selected for the word games proposed to students.

Word Games related with Letters

Some of the games to learn words are based in letters, syllables or words. Those games were used with students during the Covid19 confinement, as it has previously described (Moreno and Centelles, 2022), and include the following games.

Syllables' or Letters Groups' Games

These games are based on the use of several words that are missing a syllable or a group of letters. This syllable or group of letters can be the same for all the words (words lacking a common syllable or a letter group, words that rhyme with individual rhyme), or different for each word (unique incomplete words, words with different rhymes), or for two word (double incomplete words, words with two-by-two-rhymes). In these last cases, it is easier to show a list of the syllables or letter groups to be filled at the words.

Anagrams

An anagram is a word that has the same letters of another one. These letter's games can be directly obtained from a single word (individual anagram of a word), from a group of words (collective anagram of several

words). Several pages can be found in Internet to get anagrams of a simple word, although many of the Biochemical words cannot be found there (Words, 2021).

Codes to Translate Words

These games develop a word by using a secret code, which can be shown in the game or it is unknown and must be guessed from other words that contain words and their translations like a Rosetta stone. The easiest method is to use a numeric code, although the code may also be alphabetic. The letters found can directly form the word or be anagrams to form them later (words translated from a numerical code, anagrams after a translation of a numerical code). The codes can also be used to find syllables in a hidden word.

In a similar way, the hidden words can contain a space for the letters and each letter can be found following a line that forms a maze (letter's mazes). This last game is easier than an anagram, as the lines show the order of these letters in the word.

Chained Words

It is really difficult to prepare a game with chained words, as many words in Biochemistry end in –ose, –ine, –ase, –ic or –ate, while few words begin with those syllables or groups of letters. Instead, a possible chained game consists in using dominoes pieces. Each domino is a rectangular tile with a line dividing its face into two ends, and these ends can contain a biomolecule's name, a formula, or the biomolecule family's name. In these cases, the student would have to look for the fitting between a biomolecule's name and either its formula or the biomolecule's family.

Results

Word games related with letters were divided in 4 groups: syllables' or letters groups' games, anagrams, codes to translate words and chained words. Hereby we show some new games of each group, that could be proposed to Biochemistry students of the Chemistry degree, in order that they could learn the nomenclature of the main molecules while playing.

Words with Rhyme (Syllables' or Letters Groups' Games)

Separate the following words in groups depending on the rhyme:
A) Ending in –ATE
B) Ending in –ASE
C) Ending in –INE
D) Ending in –OSE

Words:

ALAN_ _ _	CITR_ _ _	GLUC_ _ _	MAL_ _ _
ALDOL_ _ _	ELAST_ _ _	GLYC_ _ _	PROL_ _ _
ARABIN_ _ _	FRUCT_ _ _	HEXOKIN_ _ _	PYRUV_ _ _
ARGIN_ _ _	FUMAR_ _ _	ISOCITR_ _ _	RIB_ _ _
CARBOXYL_ _ _	GALACT_ _ _	ISOLEUC_ _ _	THIOL_ _ _

Is it possible to separate in groups depending on their rhyme in the following groups: 1) amino acids, 2) sugars, 3) Krebs cycle intermediates, 4) enzymes?

Solution:

1) Amino acids (–INE): ALANINE, ARGININE, GLYCINE, ISOLEUCINE, PROLINE

2) Sugars (–OSE): ARABINOSE, FRUCTOSE, GALACTOSE, GLUCOSE, RIBOSE

3) Krebs cycle intermediates (–ATE): CITRATE, FUMARATE, ISOCITRATE, MALATE, PYRUVATE

4) Enzymes (–ASE): ALDOLASE, CARBOXYLASE, ELASTASE, HEXOKINASE, THIOLASE

Incomplete Words (Syllables' or Letters Groups' Games)

Choose one of the letters groups in order to complete the following words:

Words:

AR_ _ _NOSE	HIS_ _ _INE
CY_ _ _NE	LAC_ _ _E
FR_ _ _OSE	P_ _ _INE
GA_ _ _TOSE	RI_ _ _E
GL_ _ _MATE	VAL_ _ _

Letter groups:

ABI	STI
BOS	TID
INE	TOS
LAC	UCT
ROL	UTA

Classify the previous words in the groups of biomolecules: 1) amino acids, 2) sugars. Search dimers in both groups.

Solutions:

(2) ARABINOSE	(1) HISTIDINE
(1) CYSTINE (2 cysteine)	(2) LACTOSE (glucose+galactose)

(2) FRUCTOSE   (1) PROLINE

(2) GALACTOSE   (2) RIBOSE

(1) GLUTAMATE   (1) VALINE

Simple Anagrams (Anagrams)

From the following anagrams, find the hidden nitrogenized compounds. Which of them is not an amino acid? Which is the amino acid that does not end in –ine? (only the two acidic and this one show this characteristic).

Anagrams:

NIELANA

NARTROPHYT

INDITHESI

DIESONANA

SILICONEUE

PAGANISERA

Solutions:

ALANINE

TRYPTOPHAN (the amino acid that does not end in –ine, and also the other two acidic amino acids: aspartic and glutamic)

HISTIDINE

ADENOSINE (it is a nucleoside)

ISOLEUCINE

ASPARAGINE

Syllables' anagrams (Anagrams)

From the following syllable's anagrams, find the hidden lipids. Which lipid can be hydrolyzed?

Anagrams:

TER-LES-CHO-OL

ATE-LE-O

TATE-MY-RIS

TATE-MI-PAL

ER-A-OL-GLYC-TRI-CYL

Solution:

CHO-LES-TER-OL

O-LE-ATE

MY-RIS-TATE

PAL-MI-TATE

TRI-A-CYL-GLYC-ER-OL (can be hydrolyzed to glycerol and fatty acids)

Words with a Numeric Code (Codes to Translate Words)

From the following numeric code, translate the following words into amino acids:

Numeric code:

A – B – C – D – E – F – G – H – I – J – K – L – M

01 – 02 – 03 – 04 – 05 – 06 – 07 – 08 – 09 – 10 – 11 – 12 – 13

N – O – P – Q – R – S – T – U – V – W – X – Y – Z

14 – 15 – 16 – 17 – 18 – 19 – 20 – 21 – 22 – 23 – 24 – 25 – 26

Word codes:

07-12-21-20-01-13-09-14-05

03-25-19-20-05-09-14-05

16-05-14-25-12-01-12-01-14-09-14-05

16-18-15-12-09-14-05

01-19-16-01-18-20-01-20-05

22-01-12-09-14-05
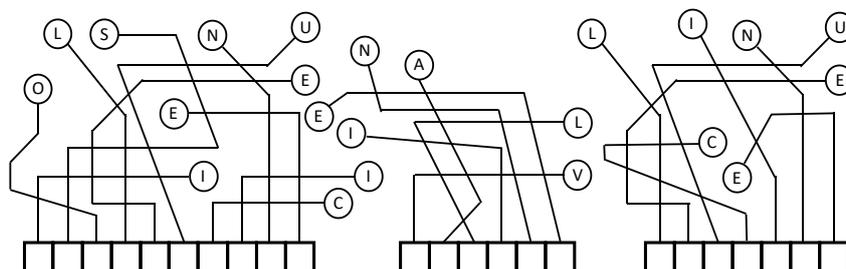

Solution:

GLUTAMINE

CYSTEINE

PHENYLALANINE

PROLINE

ASPARTATE

VALINE

Words with Letter Mazes (Codes to Translate Words)

Find the biomolecules hidden in these letter maze:

What kind of biomolecules are they? Which of them are isomers?

Solution:

ISOLEUCINE, VALINE, LEUCINE. All are branched-chain amino acids.

LEUCINE and ISOLEUCINE are isomers.

Dominoes with Nomenclature and Structures (Chained Words)

In this game, each name of biomolecule fits only with one structure.

Chain the following domino tiles fitting names and chemical structures. Which molecule is not an amino acid?

1) $H_2N-CH-COOH$; $CH-OH$; CH_3 | GLYCINE

2) $H_2N-CH-COOH$; CH_2 ; OH | LEUCINE

3) $H_2N-CH-COOH$; CH_2 ; $CONH_2$ | ALANINE

4) $H_2N-CH-COOH$; CH_2 ; SH | RIBOSE

5) $H_2N-CH-COOH$; $CH-CH_3$; CH_3 | SERINE

6) CHO ; $H-OH$; $H-OH$; $H-OH$; CH_2OH | PHENYLALANINE

7) $H_2N-CH-COOH$; CH_3 | CYSTEINE

8) H_2N-CH_2-COOH | ASPARAGINE

9) $H_2N-CH-COOH$; CH_2 ; $CH_3-CH_2-CH_3$ | THREONINE

10) $H_2N-CH-COOH$; CH_2 ; (benzene ring) | VALINE

Solution:

1 – 8 – 3 – 7 – 4 – 6 – 10 – 5 – 2 – 9 – 1

Ribose is a sugar, and all other molecules are amino acids.

Dominoes with Nomenclature and Biomolecule's Family (Chained Words)

In this game, each biomolecule's family can fit with several names, and thus there are several solutions, although only those that use all the tiles are valids.

Chain all the domino tiles in order that all the biomolecule's families fit with the names of the molecules.

1)	GUANOSINE ● Amino acid	2)	VALINE ● Nucleoside
3)	CYSTEINE ● Carbohydrate	4)	RIBOSE ● Lipid
5)	CHOLESTEROL ● Lipid	6)	GLUCOSE ● Carbohydrate
7)	ADENOSINE ● Amino acid	8)	OLEIC ACID ● Carbohydrate
9)	ALANINE ● Amino acid	10)	GALACTOSE ● Nucleoside

<u>Possible solutions</u>:

1 – 2 – 7 – 9 – 3 – 6 – 4 – 5 – 8 – 10 – 1   7 – 2 – 1 – 9 – 3 – 6 – 4 – 5 – 8 – 10 – 7

1 – 2 – 7 – 9 – 3 – 4 – 5 – 8 – 6 – 10 – 1   7 – 2 – 1 – 9 – 3 – 4 – 5 – 8 – 6 – 10 – 7

1 – 9 – 2 – 7 – 3 – 6 – 4 – 5 – 8 – 10 – 1   7 – 9 – 2 – 1 – 3 – 6 – 4 – 5 – 8 – 10 – 7

1 – 9 – 2 – 7 – 3 – 4 – 5 – 8 – 6 – 10 – 1   7 – 9 – 2 – 1 – 3 – 4 – 5 – 8 – 6 – 10 – 7

1 – 3 – 6 – 4 – 5 – 8 – 10 – 7 – 9 – 2 – 1   7 – 3 – 6 – 4 – 5 – 8 – 10 – 1 – 9 – 2 – 7

1 – 3 – 4 – 5 – 8 – 6 – 10 – 7 – 9 – 2 – 1   7 – 3 – 4 – 5 – 8 – 6 – 10 – 1 – 9 – 2 – 7

1 – 9 – 3 – 6 – 4 – 5 – 8 – 10 – 7 – 2 – 1   7 – 9 – 3 – 6 – 4 – 5 – 8 – 10 – 1 – 2 – 7

1 – 9 – 3 – 4 – 5 – 8 – 6 – 10 – 7 – 2 – 1   7 – 9 – 3 – 4 – 5 – 8 – 6 – 10 – 1 – 2 – 7

Discussion

In the present work, several games based on letters, syllables and words are shown. These games could be applied to Biochemistry students of the Chemistry Degree, in order that these students could learn some of the words shown in the glossaries of the Biochemistry books. We have classified these games into four main groups: 1- words lacking a syllable or a group of letters, 2- anagram words, 3- translation of codes or mazes, and 4- dominoes and other chained words games. In the four groups, games could be played individually and do not require a competition between several players. Games that involve a competition between several players, such as hangman game, tend to be more amusing due to interactions between players and allow competition between those players. However, the games we are looking for do not require a competition from one player against the other. In the games that we present, the player competes exclusively with himself to obtain the words that are

requested. Group 1 games (words lacking a syllable or a group of letters) are the simplest games to prepare, although they are also the easiest to solve. The easiest games to solve are those that include the possible syllables or groups of letters that can be used in the game. In this case, resolution consists on gradually substituting the various groups of letters included and identifying for each lacking word if it makes sense or not. When lacking letters are not included in the game, solving the game can be more difficult, as there are more possibilities. However, when there are several words that contain the same group of missing letters, the game is easier. In group 2 games (anagram words), games are simple to prepare, but also present a higher difficulty to solve depending on the letters of the word. In fact, if a word contains n letters different from each other, there can be found (n! – 1) anagram words. This makes preparing these words easier. Thus, the word "soup" presents $(4! – 1) = (4 \cdot 3 \cdot 2 \cdot 1 - 1) = (24 – 1) = 23$ anagrams: "sopu, spou, spuo, supo, suop, opus, opsu, oups, ousp, ospu, osup, puos, puso, posu, pous, psuo, psou, usop, uspo, uops, uosp, upos, upso". Therefore, it is easy to propose one of the anagrams as a game to find a word, but it will be somehow more difficult to find the solution of this word by combining the letters. However, students can more easily find the word by using the anagram generators found in Internet (Words, 2021). Even more difficult to solve are those anagrams that include several words, since the number of letters increases and as they are part of different words it is more difficult to cheat with the automatic anagram generators. In group 3 games (codes and mazes to translate words), mazes are easier than anagrams of group 2, since by following the corresponding path, it is possible to reach the position of the letter within the word, without having to analyze the possible anagrams of the word. Regarding the translation by using codes, if the code is included in the game, resolution of the game is easier than in the case that the player has to guess the code from other words included. Acrostics (poems that have a hidden word) (Acrostic, 2022) can be a good way to guess a secret code. For example, from the first letter (or another letter) of each verse of a poem, it is possible to obtain a secret word. Numerical codes are easier, and it is possible to define a letter with the first number and define the code by alphabetic order beginning from this letter. In Biochemistry, the translations of codes can be seen in the translation of messenger RNA to proteins. Thus, another possibility is to use the one-letter code for amino acids to generate words, and apply the code for the three bases (which can be found in a general Biochemistry book) to identify those words. Finally, group 4 games (dominoes and other chained words games) are the most difficult games to prepare. Few words in Biochemistry start with ine– or with ne–, and thus it is very difficult to chain them with so many biomolecules ending in –ine. Therefore, other types of games that do not rely on chaining the letters of the words should be used. One possibility is to chain two sets included in a tile, just as dominoes are chained. A simple game that a single player can play is a chain using two sets with the same number of elements (for example, name of a biomolecule and its chemical structure) and these sets are related by searching for the formula that corresponds to the name of the biomolecule. In this case, an exclusive sequence of tiles is obtained as solution of this game. However, it is possible to complicate the game, and even propose it for two or more players, by relating the names of biomolecules with the type of biomolecule (carbohydrate, lipid, amino acid, nucleotides). In this case, it is possible to obtain several results, although not always with as many options as those obtained by using dominoes. In the example shown hereby, due to the use of several double tiles that target the same type of biomolecules, the problem allows several solutions, just as it happens with dominoes. However, it is possible to

request the longest possible path or the path that contains a specified number of tokens.

Conclusion

Several games were developed to study Biochemistry words, and these games could be applied to the Biochemistry students of the Chemistry Degree. These games were classified into 4 groups.

Group 1 games (syllables' or letters groups' games) are easy to prepare and also easy to solve.

Group 2 games (anagrams) are easy to prepare and more difficult to solve.

Group 3 games (codes to translate words) were divided in numeric (or other) codes and letter mazes codes. While letter mazes codes are easier to solve than anagrams, numeric (or other) codes could be more difficult to solve (especially when the code is not directly given).

Group 4 games (chained words) are difficult to prepare by using directly words. Thus, other chained games as dominoes can be more difficult to solve than previous groups. The most complex game is the one containing names and structures, as requires a knowledge of the structures of biomolecules.

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A Spin-off from Physics Education Research

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Abstract: The need for an effective communication between scientific research and society is widely known to the broadest scientific community, and the sad times we are living in make it even clearer. At the same time, the need of establishing long-term structural connections between the worlds of research and that of education and scientific communication can open the way to new market opportunities. This led us to develop a cooperative society, academic spinoff of university of Calabria, named "Missione al Cubo" (mission cubed), evocative of both the "third mission" and the "cubes", the buildings of University of Calabria. The cooperative aims at operating in the market sectors at the interface between research and society. In this interface region, the spinoff will interact on one side with universities and research centers developing educational, cultural and entertainment activities directly derived from their scientific research conducted. On the other side of the interface, the cooperative will distribute the products and services generated by the interaction with research environments in a large market, consisting of schools of all levels, local administrations, museums, science communication centers. We believe that there is a large market space for a whole series of products and services conceived to create a solid and lasting interface between scientific research and the public, at both the local and global level. This market space can offer interesting opportunities of self-entrepreneurship for young physicists with strong communication skills and rich research experience.

Keywords: Physics Education Research, Spin-off, Science Education, Public engagement with science

Introduction

The participation of researchers from universities and research institutions in Education and Public Outreach activities is increasingly recognized as necessary, in order to establish an effective communication between scientific research and society, which could results in a correct information of the public about scientific issues of urgent societal relevance and in improving the way scientific research is conducted [1-4]. However, mutual mistrust, misconception, fake news are currently major issues that represent obstacles in the dialogue between science and society [1-5]. At the Physics department of university of Calabria, the need to increase the participation by researchers in education and public outreach activities has been pursued through a series of specific research lines on Physics education and public engagement [6-10].

These activities have been developed within the institutional framework of the Piano Nazionale Lauree Scientifiche (PNLS -National Plan for Scientific Degrees) in the two areas of Physics and Materials Science [6,7], an initiative of the Italian ministry of education and research (MIUR) that aims at creating connections between secondary schools and universities operating in the same local context. Within the PNLS, we have developed many initiatives, as for example didactic experimentations with schools, often integrated with work based learning experiences, which in Italy are compulsory for all the students in the last three years of the secondary cycle. These experimentations comprised didactic extracurricular (informal) activities integrated with school (formal) education, as well as citizen science projects [11] on monitoring natural radioactivity. We have also collaborated with local administrations and private enterprises in performing public events and exhibit [10] and, finally, between October 2019 and February 2020, we have managed the program with Schools of the Planetarium "G.B. Amico" of the town of Cosenza [8].

At the same time, the encounter between the demand and the offer of interaction with research environments can develop new market spaces. This led us to develop a cooperative society [11], that received the status of academic spinoff by university of Calabria and is named "Missione al Cubo" (mission cubed), evocative of both the "third mission" and the "cubes", the buildings of University of Calabria. The cooperative aims at operating in the market sectors that are determined at the interface between research and society. In the following we examine the opportunities for new business activities spinning off from universities and research institutions and operating in the market sectors developed at the interfaces between science and society.

Physics Education Research at the Physics department

In the last few years, Physics education and outreach activities towards schools have been developed at our Physics department through informal programs, developed in collaboration among the physics department of University of Calabria, schools, and informal education providers, such as museums, science centers, planetaria etc… and integrated with schools' programs and schedule. These programs have given the opportunity to bridging scientific research and science education and communication. The mechanism of integration of non-formal programs developed and supervised by our scientific institution is aided by flexibility in schedules and programs of formal schooling. For example, in Italy schools are allowed to include after-school programs, up to 15% of the regular school time. This made possible a structural and long-term collaboration among schools, universities' departments and other informal education providers in the development of after-school programs, aiming at establishing innovations and at introducing new topics, like the "School of Physics and Materials Science Technologies" that is currently under development in some schools in Italy [6], aiming at introducing topics of nanotechnology and materials science. Extracurricular programs can provide a wide variety of activities and generally operate during the hours immediately after the school day, but also include activities on weekends or during the summer. They have the great advantage that they can be freely chosen and can have open curricula, which can align with the learner's interests in a participatory and collaborative settings [6]. Moreover, specific policy interventions, such as the informal work-based experiences that are an integral part of

school curricula in many education systems worldwide like, for instance, the Italian "PCTO" ("Piano per le Competenze Trasversali e l'Orientamento" - PCTO - plan for soft skills and guidance, formerly known as school-work alternation) can allow for a larger integration of formal and informal education that can enable stronger connection with universties and research environment[9,10]. Infact, in Italy during the last three years of the secondary education cycle, students must mandatorily perform a total of 90 h of informal work-based learning experiences, i.e. in a real workplace [13]. Therefore, this requires a collaboration of the school with an organization or an enterprise, like for example a physics department in a university. This mechanism of integration between educational structures can allow a greater connection with school curricula and allowed us to develop new forms of education. For example, many schools have collections of disused and in some cases ancient scientific instruments in their physics laboratory, as well as in university laboratories many instruments are frequently replaced. Restoring this equipment can represent a meaningful work-based experience for students and can be a useful activity for creating partnerships between the school and the university [10].

Figure 1. Some Moments of an Exhibit of School Instruments at the Cloyster of "San Domenico" in Cosenza, during the 104° Congress of the Italian Physical Society (SIF) [10]

Therefore, these activities and programs allow and support opportunities for more sustained and deeper interactions than most of the current ones between research scientists and the public, especially in schools. In this way, actual research topics can be transferred into both formal schools and informal contexts, which schools and museums usually have difficulty implementing [8]. At the same time, museums and science centers can establish an enduring interaction with students, teachers and the general public that goes beyond the usual one-day visit. Moreover, through the integration of citizen science and inquiry-based after-school programs with formal school activities, the approach can enhance the diffusion of active learning techniques, which are still poorly applied [14]. These interactions can be further strengthened by institutional collaborations of universities and research institutions with science communication centers and schools. For example, the inclusion of PhD students from our physics department into the staff of a planetarium favored the involvement of young researchers [8], simultaneously providing them with the opportunity for the specific training needed to improve communication abilities, which is still largely inadequate within the current graduate programs in higher education. Outreach activities are still poorly practiced by young researchers [15], though there is evidence of the success of these programs when they are actively involved [7, 8, 16]. Participation also enhances the education of scientists and helps them to develop skills and capacities useful for both academic and non-academic careers.

A Spin-off Company

In particular, in the project developed at the Planetario "G.B. Amico" in the town of Cosenza [8], the activities with schools of the palentarium during the first year of activity have been managed by young researchers of the physics department of university of Calabria, under the supervision of senior researchers.

Figure 2. A Lesson in the Planetarium of Cosenza

This initiative showed that there exists a wide market space for a whole series of product and services conceived to create a lasting and solid interface between the university and the public. Therefore, to facilitate a large involvement of young researchers in public engagement activities and to cope with these opportunities and challenges, we decided to establish a spin-off company [12]. The cooperative society, which received the status of academic spin-off from university of Calabria, has been named "Missione al Cubo" (mission cubed), recalling both the "third mission" and the "cubes", the buildings of the university of Calabria (pictured).

Figure 3. The Cubes of the University of Calabria

The cooperative aims at operating in the market sectors that are determined at the interface between research and society. Operating in an interface region, the spinoff will interact on one side with universities and research centers developing educational, cultural and entertainment activities directly derived from the research conducted by individual researchers, research groups and departments, which can provide an almost infinite resource of cutting- edge science content on which to base the activities. In turn, the interaction with the spinoff can allow universities and research institutions to expand, through the market, their public engagement activities, reaching sectors of the public currently not reached by the institutional activities and favoring a large participation of researchers. Just to make an example, our physics department interact with 25 schools, reaching about 1000 pupils each year, while the number of schools in our region is more than 2300 with about 300.000 students.

Therefore, on the other side of the interface, the cooperative will distribute the products and services generated by the interaction with research environments in a large market, consisting of schools of all levels, local administrations, museums, science communication centers. Most of the products and services have been developed in these last years in the outreach programs of our physics department [6-10], which have been conducted with the involvement of many young researchers, graduate students and post-docs. The products include laboratory activities and extracurricular science programs for schools, development of multimedia and digital teaching materials, services for distance learning, advisory service for schools and science centers, preparation and management of science museums and exhibitions, multimedia material and fulldome shows for

planetariums. There are also products, such as summer camps and teachers' professional development activities, aimed at the public and a market of individual users. Furthermore, the evolution of public engagement as an academic research line will favor the development of new products that will expand the activities and the market space also in other fields beyond physics. Around the cooperative society it will therefore be possible to build a network for education and public outreach integrated with the school and museum system of the territory. This network develops first in the region of Calabria, whose expanding tourism market offers interesting opportunities for the business idea, but the services and products can also be exported to a wider market, both at the national and European level.

The team is made up of 14 people, mainly young PhDs and PhD students of the physics department, who therefore have a substantial background in scientific research and can bring to the public topics of actual scientific relevance, which are subject to active research at the University of Calabria. We believe that the real strength of the entrepreneurial idea is its derivation from an important scientific and research structure such as the University of Calabria, which can provide a wealth of skills and professional experiences to give the public, mainly pupils, the opportunity to approach correctly scientific research, interacting directly with people who know and practice it. Furthermore, participation in public engagement activities, which have been carried out in recent years by our physics department with a large involvement of young researchers, ensures that the team has acquired all the necessary communication skills and abilities. The choice of the cooperative form derives from these experiences. The mutualistic and democratic purposes of the cooperative society are in fact those that are best suited to an entrepreneurial activity based on collaboration between doctoral students. The cooperative form is also compatible with the scientific duties of PhD students, which can be complemented by the activity within the cooperative, according to an operating method long tested in our outreach activities. In addition, this form allows an easy exit and entry mechanism for members in the years to come, following both the evolution of the market and the formation path of the participants in the initiative. This will favor an easy turn-over, in a company made up mostly of PhD students.

In conclusion, we believe that there is now a large market space for a whole series of products and services conceived to create a solid and lasting interface between scientific research and the public, at both the local and global level. This market space can offer interesting opportunities of self-entrepreneurship for young physicists with strong communication skills and rich research experience.

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An Expository Essay on the Role of Silence in Surviving Adversity: Stories from Japanese American Internment Survivors and Their Families

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Abstract: In an expository essay format, the author (Kelli Ling) will discuss the writings of three Asian American authors – George Takei, Kimi Cunningham Grant, and Mako Nakagawa – all of whom experienced, either personally or through family members, the devastation and trauma of being forcibly imprisoned during WWII in Japanese Internment Camps in the interior of the United States. Through their poignant memoirs, Ling will discuss silence as a communicative construct within the frameworks of survival, face-saving and protecting one's identity, reasserting unbroken loyalty to one's country, and reharmonization of an ethnic community under extreme duress from societal discrimination. Textual evidence includes specific situations in the authors' narratives where these individuals confront racism in society and how the deliberate act of silence, rather than being a symbol for complacency, was a valuable rhetorical device that enabled them and their families to survive years of adversity. These three writers each deliver commentaries about society's racist attitudes at the time and the implications of speaking out versus remaining silent during internment and years later. Moreover, this essay will take the position that the construct of silence, as a rhetorical device, rather than being a sign of weakness or complicity, reflects the strength of a community; and when that silence is broken, it too is a sacrifice for the benefit of others.

Keywords: Racism, Oppression, Rhetoric, Silence, Communication, Message framing, Japanese Americans, Internment camps, World War II, Erving Goffman, Powerlessness, Face saving, Survival, Loyalty, Reharmonization

Introduction

Ling discusses the communicative construct of silence and its role in the context of adversity through the poignant writings of three Asian American authors -- George Takei, Kimi Cunningham Grant, and Mako Nakagawa -- all of whom experienced, either personally or through family members, the devastation and trauma of forced imprisonment in Japanese American internment camps following the 1941 Pearl Harbor attack. Through the authors' family narratives, alongside the ethnographic writings of Susan Kamei and Shirley Ann Higuchi, Ling posits that the construct of silence in the context of internment survivors, rather than being a symbol of complacency or surrender to unjust circumstances as is often purported in individualistic-based societies, can

instead be reconceptualized in four key ways: (1) as a valuable rhetorical device that enabled this population under attack to survive years of acute isolation, adversity, and extreme humiliation, (2) as a way of saving face and protecting one's self identity as Japanese Americans in situations of extreme powerlessness, (3) as a reassertion of internees' unbroken loyalty to their adopted and/or birth country – the U.S. - in a time of world war, and (4) as a means for reharmonizing a segment of society which was facing overwhelming discrimination and loss of civil rights due solely to ethnicity.

It is important to note too that the authors' frame their discussions on the construct of silence through a critical lens that includes cultural and generational differences, and primarily as an inadequate response by their elders to being forcibly interned during WWII, in a way that not only pressures previous generations to verbalize and revisit this past victimization but also be judged by it. In addition, these three writers deliver textual evidence from interned family members about the implications on the larger Japanese American community from speaking out individually in the context of a global war in the 1940s. Sociologist Erving Goffman's frame analysis (1974) is referred to and extended to scaffold the argument that wordlessness in times of extreme adversity is, in fact, a powerful speech act that can hold direct (pragmatic survival strategy) and indirect (face-saving, loyalty, reharmonization) meanings in the communication exchange. Indeed, their silence spoke volumes.

Literature Review

Understanding Silence as a Rhetorical Tool

Author Violet Harada (1996) notes that for decades the "Japanese American story of incarceration was largely hidden under a cloak of silence" (Harada, 1996, p. 630). Yet, within that framework of silence can be found a powerful message of hope, strength, and resilience for targeted individuals and their larger communities. The construct of silence, as a rhetorical device, has a significant pragmatic role in terms of survival, especially during periods of adversity, oppression, and continued incidents of racism, and may be wisely adopted by those under attack to endure years of societal abuse. A foremost example from 20th century U.S. history is when the federal government (under Executive Order 9066 signed by President Franklin D. Roosevelt) forcibly interned thousands of Japanese Americans in bleak, barbed-wire fenced and armed military prison camps based entirely on ethnicity, stripping this entire ethnic population of their basic civil liberties (Kamei, 2021, p. 565).

Roosevelt's mandate gave the U.S. military near-unchecked powers to aggressively and without notice arrest, detain, imprison, and relocate whomever they deemed a threat to the war effort -- and was arguably intended to "cast a blanket of blame" on this specific population of Japanese living in the U.S. for violence taken by another country (*e.g.,* the surprise attack on Pearl Harbor by Japanese forces on Dec. 7, 1941) and without sufficient evidence that this ethnic group posed any immediate dangers to national security interests (Higuchi, 2020, pp. 28-38). Many Japanese Americans had no crucial ties to the East and considered the U.S. to be their only home. Thus, this governmental action was reactive and based on a fiction told by those needing to justify an unjustifiable violation of an entire population's freedoms.

As a result of Executive Order 9066, approximately 120,000 people of Japanese ancestry (two-thirds of whom were full U.S. citizens) were forcibly taken from their homes and locked up in one of ten guarded internment camps in the 1940s, specifically in the states of California, Colorado, Wyoming, Utah, Arkansas, and Arizona ("Japanese American Incarceration," 2018, para 1). This action taken by the federal government stemmed from political pressures and rising anti-Japanese hysteria, and I posit, was a form of political persecution and societal discrimination. It resulted in the separation of families and the shattering of entire communities. Though the majority of those who were interned were from the West Coast (Kamei, 2021, p. 28), the hostility directed at this population was, in fact, a national disease that began prewar with increasingly restrictive immigration laws (Dundes Renteln, 1995).

The group of Japanese Americans called the *nisei* were born in the United States, and many had never visited Japan. The *issei* were first-generation immigrants to the U.S. from Japan who brought with them traditional values such as respect for the family, patriarchy, hierarchy, and collectivism versus individualism (Neuliep, 2014, p. 319-320; Kitano, 1976). While Western ideology favoring individualism may associate silence with other behaviors like relinquishing of rights or tolerance of abuse, this is not the case for all groups; and this difference in perspective proved crucial to misunderstandings between generations.

For example, both the *issei* and *nisei* had to grapple with overwhelming hardships experienced during WWII, including being investigated by the FBI, being questioned about their loyalty to the U.S., being removed from their homes, being separated from their family members into camps, losing their freedom, jobs, and property, and even death due to poor living and medical conditions in the camps. On the other hand, while Japanese American *sansei* (whose parents were U.S. born and grandparents were immigrants from Japan) and even *yonsei* (considered the fourth generation and more ethnically and racially diverse) did not live through these devastating times, they were nonetheless affected by the older generation's lifelong trauma (Higuchi, 2020, pp. 37, 270; Kamei, 2021, p. 357).

Generational Differences on Speaking Out

However, generations differed in their perspectives on forced segregation, wrongful imprisonment, and vocal protests – and this outcome may be linked with different generation's psychosocial identities which are reflective of a particular social and historical period (Josselson & Harway, 2012), such as a world at war. Older generations of Japanese American *issei* had to understand and consider the context of the world situation at that time which involved Japan becoming a world power and allying itself with Nazi Germany. This generation believed that they were saving themselves and their families by not responding in ways that might reinforce support for prejudices against them as ethnic minorities; but to the later U.S. born *sansei* and even to many *nisei* who were young when their families were interned, this was a deeply disappointing response to their intolerable and unjust treatment as Americans, causing fractured relations between the generations until they came to some mutual understanding of what happened and why (Chun, 2017, p. 23-28).

Over one hundred of these internment experiences have been documented by author and legal scholar, Susan Kamei, in her 2021 book, *When Can We Go Back to America?* Her work, along with the narratives of other Japanese American authors, implicitly and explicitly support the argument that silence, as a communicative construct and a speech act, cannot be divorced from deeply-held beliefs surrounding cultural identity, such as face-saving, protecting one's self-identity, showing loyalty to a nation, and reharmonization of a community under extreme duress; it is, therefore, an interconnected relationship with important linguistic meaning related to message framing theory. These issues are apparent in the works of George Takei (*They Called Us Enemy*), Kimi Cunningham Grant (*Silver Like Dust – One Family's Story of America's Japanese Internment*), Mako Nakagawa (*Child Prisoner in American Concentration Camps: A Memoir*), and Shirley Ann Higuchi (*Setsuko's Secret: Heart Mountain and the Legacy of the Japanese American Incarceration*). All of these literary works convey messages of shattered lives due to racism and mass anti-Japanese hysteria in a time of war. Additionally, the authors personally grapple with and are critical of the role of silence as an appropriate versus insufficient response to tragic life events, such as internment.

Reframing Silence: Survival, Saving Face, Reasserting Loyalty

Eventually, as their narratives unfold, the writers come to terms with how wordlessness in a time of powerlessness afforded strength and prevented greater loss of face for older generations of Japanese Americans during WWII – and show readers, through their heartfelt narratives challenging their elders, how the purpose of silence, as a speech act, does not need to symbolize weakness or surrender as is often the case in individualistic societies; rather, it can work as a powerful rhetorical device to enable both individuals and communities to survive years of hardship, racism, ethnic violence, forced segregation from larger society, imprisonment, isolation, and profound loss (Takei, 2019, Grant, 2011, Nakagawa, 2019).

It is always difficult to speak about the horrors of history. It can produce such unwanted emotions as shame, fear, sorrow, humiliation, and deep sadness. What is unsaid too may be more revealing about a time, place, and people than what is articulated. Nonverbal gestures (kinesics) such as a slight nod or downcast eyes accompanied by wordlessness may carry a strong implicit message for both the sender and receiver, though these actions may be interpreted differently based on the generation and important cultural contexts (Neuliep, 2014, p. 320).

For example, King and Aono's (2017) cross-cultural research suggests that "the Japanese have a natural proclivity for silence in communication and that traditionally within Japanese culture, a greater relative value has been placed on silence in comparison to talk" (p. 490). This can be seen in Takei's memoir, *They Called Us Enemy* (2019), as he recounts his confusion and bitterness over his parents' silence after his home in California was stormed by armed military police following the bombing of Pearl Harbor and his father, a dry-cleaning store owner, taken into custody. The entire Takei family was removed from their home and transported to a temporary holding facility (a horse racetrack) in Santa Anita, California, to be processed for lengthy internment in one of the

hastily-built and sparse relocation camps (pp. 27-31). This was a common detainment story, also seen in Kamei's compilation of case studies.

Revisiting Past Traumas: Criticizing Silence

Takei remembers: "Each family was assigned a horse stall, still pungent with the stink of manure . . . As a kid, I couldn't grasp the injustice of the situation. But for my parents, it was a devastating blow. They had worked so hard to buy a two-bedroom house and raise a family in Los Angeles. Now we were crammed into a single, smelly horse stall. It was a degrading, humiliating, painful experience" (p. 32). In *When Can We Go Back to America?*, Kamei shares a similar account related to her by an internee, Dollie Kimiko Nagai, who was only fifteen years old when her family was detained for being of Japanese ancestry, recalling vividly how "[t]hey put as many people as possible on a truck to take us to our barracks . . . They shoved us, pushed us, rammed us all in like cattle. I felt like an animal" (Kamei, 2021, p. 132). Such experiences share a common thread of dehumanization and cruelty at the hands of others, but they also point to a necessary critical conversation regarding the role of culture and interpretation of meaning in the communication exchange. It is important to realize that the older generations' decision, in most cases, to follow unjust incarceration demands by authority figures at the time of war without verbal protesting can be associated with an important act of "face-saving" since the message receiver feels that he or she is powerless in the situation (Yule, 2016, p. 148). Moreover, the construct of silence, as defined in discourse analysis, is an important theme and a necessary rhetorical device for people who believe they have no voice and no choice in their present fate, but who may value saving face and reasserting loyalty – and a sense of belonging -- despite severe societal punishment. Such was the case with Japanese Americans interned in U.S. prison camps for the duration of WWII.

Kimi Cunningham Grant describes this phenomenon in her book, *Silver Like Dust* (2011), as she talks about her interned grandmother whose father (also interned) prided himself "on being a law-abiding man . . . so he stressed the importance of obeying the rules, even if they seemed unnecessary or unfair. He never said whether or not he agreed with the laws; he simply emphasized the value of respecting them. 'A nation cannot thrive if people decide to create their own rules … Your mother and I chose to move to this country, and we must be willing to follow its laws" (p. 57). What if those laws, however, are explicitly discriminatory and representative of a fearful collective mindset held by a majority of voices towards a specific population under attack for the actions of others? What if those laws take away the ability of one group in society to communicate their loyalty and coexist in times of political upheaval with other minority groups, as well as the majority, in order to maintain a sense of belonging? What if those laws interfere with an ethnic group's reharmonization in society, especially during the post-war period?

Reconceptualizing Silence in the Context of Adversity

The use of silence as a speech construct employed in times of adversity does not imply that talk fails to matter; instead, it suggests that nonverbal communications that do not rely solely on oral language for interpretation can encourage a larger meaning that creates impressions on message receivers, even those holding very high to extreme levels of racial prejudice or misinformation about a specific culture (Kitano, 1995). Indeed, we can return to Ancient Greece, specifically Socrates's teachings as understood through Plato's dialogues, to appreciate why verbal communication with questions and answers (dialectic) continues to be valued in Western cultures. However, I posit that saying verbal speech is the only form of purposeful communication in all outcomes and all contexts is shortsighted since diverse cultures teach different oral and written communication rules and protocols. Speech acts that are not outright direct verbal responses to situations of injustice and discrimination, but instead allude to a larger meaning such as saving face and reharmonization, can also carry meaning to help ensure a community's survival (pragmatic role) despite great odds, which may also be viewed by victims as more important than individual rights. Evidence of this is seen in both Takei's story involving his father and in Higuchi's account of her mother.

Cultural and Generational Differences and Communication

In *Setsuko's Secret*, Higuchi's parents were among those thousands of people rounded up and imprisoned simply for being of Japanese ancestry. Her parents met at a makeshift school in Heart Mountain relocation camp in Wyoming when they were young (Higuchi, 2020, pp. 3-6). For years, the author's mother, whom she describes as a "Japanese American June Cleaver" (p. 235), refused to answer questions about her traumatic past experiences during the war, saying only that the camp was where she met their father and that she was a 'happy' child – trying to avoid deeper conversations about anti-Japanese hysteria and unjust incarceration (pp. 5-6). Yet it is conceivable that in response to these traumatic happenings, Setsuko responded later in her life and through her parenting choices by pushing her children, including Shirley, ultra-hard to assimilate into mainstream society — and to be seen by others as a 'model' American family (p. 7). However, this desire to blend into larger society did not erase the past victimization that deeply affected both of Higuchi's parents, particularly her mother, Setsuko. She writes: "Although my mother never talked about the negative experiences of incarceration, I instinctively knew that something bad had happened to my parents and grandparents. Instead of hugging, nurturing, or telling me she loved me, my mother tried to fill the void created by her childhood incarceration with the latest fashion . . . something about it seemed as if she were covering a deeper damage" (Ibid). For years, before her mother's cancer diagnosis, the Higuchi family never spoke about internment and Shirley eventually concluded that her mother's stubborn silence, sometimes communicated very bitterly to her daughter, served as a vital coping mechanism, allowing Setsuko to regain some control over the family's fate as non-white ethnic Americans and to help shape "our environment as children" in a way that her own incarcerated parents had been unable to do for her (p. 237).

In his research, Adam Jaworski (1995) argues that silence in oral communication should not be considered absolute and not in opposition with what we typically consider speech or speech acts. Instead, silence and speech are part of the same communication process where activity in the transfer of message meaning from one person to another can overlap (p. 62). By extension, silence used in response to atrocity and hardship, and within a system enforcing collective punishment against a specific population, can in fact be a powerful rhetorical device in and of itself, because it conveys an implicit meaning that asserts 'justice will eventually win out because we, as a community living here and raising our families, have done nothing wrong and are showing solidarity in a time of great national crises' despite our circumstances (Takei, 2019, pp. 192-195).

It is not an overstatement to say that everything changed in these authors' lives and the lives of their families as a result of years of unjust incarceration and societal discrimination. Takei, Grant, and Nakagawa each chronicle their family's past wartime horrors and discuss how they eventually broke the long-held silences of previous generations to piece together their family histories and, by extension, their own bicultural, dual identity stories (Collins, 2012). The writers appear to echo what author Harry Kawahara (1996) remarked about his imprisonment in the camps: "Our self-esteem, our self-regard, was shattered. We did not feel comfortable talking about our camp experience with others . . . It brought great discomfort" (p. 630). Consider how internee, Masani Fukai, who was fifteen years old when he was imprisoned in the Gila River relocation camp in Arizona, describes the older generation's efforts at reharmonization of a community both during and after war. He notes the harsh judgments of later *sansei* (and even some *nisei*) on those who remained silent during internment, stating that "[w]e, as older Japanese Americans, have been criticized in the past by our young people — why we never fought or spoke up on this unforgivable action . . . If it happened to us, it could happen to anyone . . . The United States government owes the Americans of Japanese ancestry compensation for lost opportunities, lost property, lost security, and lost self-esteem" (Kamei, 2021, p. 324).

Message Framing Theory

Takei, who was only five when he was first interned at Camp Rohwer in rural Arkansas, could not fully comprehend what was happening at the time — through his innocent eyes, he thought it was all an "adventure" (Takei, 2019, pp. 38-40). However, years later, he understood societal racism and the injustice of internment. Takei argues that more victims of internment should have spoken out in protest of this unjust treatment at the time it was happening and not years later: "For us . . . our American heritage is, in fact, the loss of freedom and liberty. Ours is a story of indignity and incarceration. Ours is a case of the failure of American ideals. Because of this history, those ideas of individual dignity and freedom are that much more precious to me" (Kamei, 2021, p. 321). The implicit message in all of these writers' accounts is one of great difficulty in appreciating the role of silence in older interned generations of Japanese Americans, but also, conversely, an acknowledgement of this population's immense strength, perseverance despite enormous personal costs, and ability to completely sacrifice their individual rights for the sake of the family and larger community.

In his work on *Intercultural Communication* (2014), James Neuliep conceptualizes the exchange of verbal and nonverbal communications within a particular cultural context that includes social, physical, and psychological factors: where one raises a family, in what community one lives, and the importance of a person's status in his/her community. Between cultures and within cultures, too, there can exist distinct groups that create smaller "microcultural," or subcultural, contexts (p. 25). All these notable Japanese American authors address a shared cultural context in their literature, being of Japanese ancestry; however, it may also be the case that because of generational differences and diverse experiences growing up in the U.S. (e.g., *issei, nisei, sansei, yonsei.*), or even between older and younger members of the *same* generation, there may be 'microcultural differences' in perceptions and communications that influence individual responses to adversity. Thus, the way our communications are framed becomes very important when considering shared life experiences (Chun, 2017, Takaki, 1989).

Message framing alters the interpretation of a situation because it involves the arrangement of subjective meaning. According to sociologist Erving Goffman (1974), frames are abstractions that serve to organize messages in ways that alter reality for both sender and receiver (p. 496). While he makes a compelling case for using individual rather than social interpretations when applying this theory, it is nonetheless a communication strategy guided by how the experience is structured and this can be extended beyond the individual and to populations under duress, I posit. It is important to understand that Goffman describes two different types of "primary frameworks" — natural and social. Natural frameworks identify events as physical occurrences and social frameworks view events as socially driven (pp. 21-22). Both primary frameworks can be applied to Japanese American internment case studies, but it is the second type, social, that relates more to Takei's, Grant's, and Nakagawa's narratives. Why? Their stories involve the interpretation of social occurrences that not only lead to a sense of individual and community powerlessness but also hold a larger meaning about unchecked institutional racism and an unwarranted fear of immigrant populations that result in a loss of freedom and dignity (*i.e.,* real-life experiences such as being imprisoned *en masse* based on ethnicity alone).

Each author candidly and touchingly describes his or her experiences with internment in a way that is deeply meaningful and personal. Each delivers a powerful commentary on the pervasive anti-Japanese sentiment occurring throughout the United States in the 1940s, along with the serious repercussions of speaking out about the plight of Japanese Americans in the context of war. However, as young children growing up confined to these prison camps, both Takei and Nakagawa eventually wanted their families to break their silence to help them understand why more victims of internment chose not to speak out vehemently until years (even decades) later. Grant, who was born after internment, tries to understand how internment affected her family story by focusing on her grandmother. The author said she wanted to understand if her grandmother's reluctance to talk about these moments over the years had anything to do with a loss of self-worth or a fear of future injustice as a result of politically motivated mass incarceration (Grant, 2011).

With or Without Words: The Silent Heroes

The writers interpret their family members' (collective) silence as being rooted in clashing cultural values of what constitutes shame and loyalty, though Takei also links the construct of silence to his father's passionate belief in democracy (Takei, 2019, p. 195). Nakagawa connects the difficulty of speaking out with notions of "secrecy" and "heartbreaking actions against humanity" (Nakagawa, 2019, 112). "Most of us *sansei* agree that many of the older generations were too ashamed, too embarrassed, too angry or the memories were too painful to talk about," she contends (p. 244). The authors, individually and collectively, pick up the mantle of justice for their families and their larger communities in their writings, rediscovering pride in their dual Japanese American identity — and gain some closure from this bitter chapter in their lives and family histories.

Through black and white drawings and dialogue, Takei expresses the sentiment of hopelessness felt by him and his family at what was happening around them, like enforced curfews, roundups, racist newspaper images and headlines saying, "No Japs" and "Out they go! Japs evacuate" (Takei, 2019, pp. 20-21). However, as a child, Takei did not fully understand the reasons behind this hostility towards his family. He cleverly and sensitively contrasts for readers the images of being a smiling, joyful child who, at the time, proclaimed it would be 'fun' to sleep with horses in a makeshift detention center in California with an older Takei who expresses barely contained anger towards his father (and the country) at the inhumanity of incarceration brought against an innocent group of people by "fallible" human beings in positions of power and leadership (Takei, 2019, pp. 32-45).

In graphic panels, we can witness how Takei's mother and father are unable to conceal their horrified reactions at being bedded down in horse stalls, but they never corrected their young son's naiveite, shielding him as much as possible from the bleak reality of the war and increasing anti-Japanese hysteria of the time period (p. 32). Eventually, the author confronts his father about why he, as head of the family, failed to speak out on behalf of his loved ones. It makes an unsettling encounter between father and son as they struggle to find mutual ground and understanding amidst the backdrop of internment. After the war ended and the last relocation camp was closed in 1946, a then-teenage George angrily confronts his father. The drawings in his novel show the teen with heightened, angry expressions, standing up from his seat, hitting his hands and yelling, while his father casts his eyes downward, remains still, and lapses into even more silence. Again, we can see the power of his father's kinesics, especially facial expressions. The next panel shows him calmly but somberly asking his son in reply: "What do you think I should have done?" (pp. 141-142). At this, George's directness as a young American collides with his father's reserved frankness. He replies that "you [father] led us like sheep to a slaughter, into a barbed-wire prison" (p. 142) and there is an implication, whether justified or not, that the elder Takei lacked the personal integrity his son had come to value because he failed to speak out against injustice. However, in response to these harsh words, Takei's father simply says: "maybe you're right." There is a hint of understanding of each internee's feelings, though it is strained. The exchange ends with George looking away from his father, his head in his hands, while his present-day self looks on and expresses his deep regret and sorrow for furthering his father's pain through "arrogant . . . outspoken bluntness" (Ibid). Here, the reader is given another view on the role of silence as a means of survival and a communication response by older generations of Japanese Americans. By juxtaposing the older Takei's newfound recognition of his father's suffering from being interned with the one-sided

conversation between teenager Takei and his stoic gray-haired father, the narrative frames the message about valuing the silently suffering parent who sacrifices everything, including his freedom and dignity, to protect his family from further harm. It is an intensely moving exchange to witness and shows readers how these silent internees where, in fact, the heroes of the interment story.

Reasserting Loyalty: Generational Responses

George came to understand that it was important for his father not to exacerbate a volatile situation with angry words of protest at U.S. authorities, but instead to go quietly into the relocation camps with his young family to prove loyalty to one's adopted country and maintain faith in its democratic principles (p. 178). The promise that 'all men are created equal' gave Takei's father the strength to keep believing in a larger principle of justice that would eventually restore their place as valued members of society. However, it took years for the United States government to make a formal apology and offer reparations to survivors (Kamei, 2021, p. 557; Takei, 2019, pp. 192-193). Even during the later free speech movement of the '60s, when it was popular to support public protests for human rights, internees remained mostly silent about their horrific past experiences and treatment. An exception to this was the highly controversial 1957 novel by author John Okada titled *No-No-Boy*. This book is about a former internee facing racial politics postwar (Kamei, 2021, p. 304). To be a "no-no-boy," as the name suggests, was strongly discouraged by older generations during internment because it meant answering "no" to a question about fighting for one's country and thereby showing loyalty or disloyalty (Wheeler, 2019). These were politically-motivated questionnaires given to internees — and negative answers meant further restrictions on one's freedom and longer confinements in the camps (Kamei, 2021, pp. 202-207). Japanese American men who were draft resisters were also sent to prison. The question of loyalty in this framework, as noted by Japanese American speaker and filmmaker Frank Abe, was a trap. 'You had to prove yourself a worthy American by saying yes to enlistment, otherwise, you were seen as deserving an ominous fate' (Frank Abe, YouTube video, 2018). Readers can appreciate how internment turned out to be a *fait accompli* for families of Japanese ancestry during the war. It was a period that, culturally and perceptually, showed a majority white nation with degrading attitudes towards its minority East Asian members contributing to feelings of outrage in younger generations and overwhelming shame in older generations (Isomine, 2013).

Shame, Fate, and Discourse: Cultural and Generational Divides

Like Takei's parents, Kimi Cunningham Grant connects the concept of *haji* (shame) to her grandmother's six decades of silence as an internment survivor. In *Silver Like Dust*, Grant details the confinement of her grandparents and great-grandparents at Heart Mountain in Wyoming, and how this situation, as seen through her grandmother's eyes, would teach Kimi about shame, injustice, and the choice to be silent about past sufferings (Grant, 2011, p. 6). Kimi's grandmother maintained her silence for decades but eventually opened up to her in a series of intense, earnest conversations chronicled in her book. In one instance, Grant learns about how her grandmother's family descended into a shocked silence after hearing about the attack on Pearl Harbor (p.43). Since her *obaachan*

[grandmother] was a child at the time, she confessed that she didn't understand the implications of Japan's involvement in the war, but her father (Grant's great-grandfather) certainly did, having what she described as an "intuition of what the future might hold … he sat in grim silence, listening over and over to the reports on the radio. It seemed during the day [that] he developed two tiny indentations on his forehead … like the marks left by a hoe splitting the earth" (p. 44). The metaphor of the hoe evokes an idea of earth-shattering upheaval, much like the forthcoming executive order, arrests, imprisonment, and forced labor in the Japanese American internment camps.

Grant also parallels her great-grandfather's quiet intuition and preparation for adversity with her grandmother's later choice to live silently with this traumatic family history. Talking openly about internment carried with it the possibility of great shame. The cultural concept of shame influenced how internment survivors responded to racism and segregation during the war. Takei recognized how people going through such deeply unsettling times would be "haunted by shame for something that wasn't their fault." The irony is that "shame . . . should rest on the perpetrators. But they don't carry it the way the victims do" (Takei, 2019, p. 140). The panels in his memoir show the author looking back in time into a dark haze. Another panel juxtaposes older Takei's narrative about protesters being taken away by armed guards in the camps with close-ups of other internees' faces wearing resigned expressions, silently bearing the hopelessness of their confinement (pp. 134-135). In Grant's book, the author vividly recounts how her grandmother's emotional reaction decades later involved her entire body shuddering uncontrollably as she relived events at Heart Mountain for her granddaughter (Grant, 2011). Yet, Grant held firm to the conviction that finally opening up after all these decades would "give a voice to this woman (p. 8) . . . Together we began the slow, cautious dance of reconstructing 1941 through 1945, the years that profoundly shaped four generations of my family, years we had all tried to forget" (p. 11). The author frames the construct of silence as something done to her grandmother without choice. However, her grandmother perceives her silence as a right to privacy from others learning about her shameful, deeply humiliating past. Moreover, by describing their talks as a "slow cautious dance," the author shows her sensitivity to their differing perspectives on the role of silence (*i.e.,* empowering versus disempowering), thereby framing her grandmother's recollection of the past as an important, but purposely hidden, cultural narrative.

Although Grant understood the Japanese word *shikataganai* to mean things that cannot be changed or fate (p. 25), she discovered that the word also epitomized the generational differences between her grandmother and her. "It's a way of thinking . . . It's a saying that all Japanese told each other when something unfair was happening, like the laws, or the headlines that said everyone was a spy or that we were all sneaks" (Ibid). Her grandmother confides that for many traditional Japanese, it is unthinkable to pick at old wounds. No matter the injustice, no matter the inequality and prejudice "[y]ou didn't resent the hurtful or negative things that happened to you. You followed the rules. You didn't resist'" (p. 24). In this statement, strength in the use of silence in response to adversity, along with a recognition of the role of fate in one's life, can be heard. Additionally, Grant contends that younger generations should hear these candid narratives from their interned family members even if it is painful to both message sender and receiver. It significantly shaped the author's life and perspectives on herself and her identity,

including being an ethnic American. Moreover, Grant writes that her grandmother "still felt shame about what had happened" (p. 4), even though she was just a young woman, 20, when she was taken from her Los Angeles home, along with her parents, and interned for the duration of WWII. She acknowledges how societal attitudes influenced her grandmother's stories. "As I listen to my grandmother talk, I cannot help noticing the contradiction, the odd and complicated problem of *what preceded what*" (p. 23). Moreover, she goes on to explain that her family's situation was tied in with racist prewar attitudes towards Japanese immigrants and their American-born children who were "not hired by white employers. They were not permitted to integrate into white, or otherwise, social spheres. Yet, they were criticized by the public and the media for just that: for not fitting in, for keeping to themselves, for not being 'bona fide citizens,' for not being American" (pp. 23-24). This societal condemnation left a deep imprint on the psyche of Grant's grandmother and, by extension, the author herself. Her *obaachan* carried the shame and humiliation for her entire life, influencing her verbal and nonverbal communications -- and her important family relationships. *Silver Like Dust* is the author's attempt to bridge the generational divide and to share her grandmother's past burden.

Author Mako Nakagawa interprets her father's silence on the internment of Japanese Americans differently as she relates it to her father being blindsided by what was happening -- his eventual detention and forced isolation from his beloved family. In her text, *Child Prisoner in American Concentration Camps*, Nakagawa chronicles her four years in internment camps as both punishing and revelatory. Like Takei, she experienced this situation first-hand, as a young child growing up on the West Coast who was taken away from her Seattle home to relocate with her family after the attack on Pearl Harbor in 1941 (Nakagawa, 2019). Unlike Takei's narrative, however, Nakagawa was separated from her father for two years in different camps, all the while not knowing where he was sent or why they were separated or what happened to him. She said as a young child of five growing up in the U.S., she was "oblivious" to the anti-Japanese hysteria of the time and emotionally overwhelmed by her father's arrest; however, before long "I would see that Japanese Americans were constantly reminded that we were different, and often demeaned and discredited by the white world" (p. 31). The author was among those thousands of internees who were American citizens by birth.

Her experiences resemble both Takei's and Grant's families when it concerns constructs of silence in surviving adversity, along with institutional racism, injustice, separation, and profound loss. She explained: "I still carry the pain and anguish Papa felt that day he was arrested and taken away from his family. It is Papa's pain that compels me to renew my resolve to share his dreams of justice" (p. 235). In this passage, the author describes how profoundly separations are felt, even after a family is reunited or released from the camps, and those difficult years of imprisonment by a larger society that perceived ethnicity as threatening.

The authors' writings show how difficult it is to reconcile acts of discrimination, abuse, and injustice with democratic promises of equal rights and fair justice. Like Takei, Nakagawa's 2019 memoir draws parallels between her father's arrest and the increasing anti-Japanese hysteria of the time. Shocking events such as the day FBI agents stormed into their home, ransacked it for evidence of disloyalty to the U.S. and took special note of

her father's "valued traditional Japanese swords" (p. 5) stayed with her all of her life. She learned too that actions based on mass hysteria, prejudice, and fear could result in highly irrational thoughts and actions by people in positions of power, such as when officials concluded there was 'suspicious' behavior with Nakagawa's father after finding 'a made in Japan object' in their home. Once again, silence as a speech act is evident in this scene as the author describes her family's shocked quietness at the unjust violation of their home, property, and persons. Because Nakagawa was young at the time, she ran away after her father's arrest, sobbing, and shaking "beneath a pile of blankets" left by ransacking agents (p. 6). Only two months later, the rest of her family would be informed that they too had to leave their home with whatever belongings they could carry to be relocated to one of the internment camps. The family ended up in Idaho's Minidoka Internment Camp, a camp in the desert enclosed in high barbed-wire fencing and with armed watchtowers, but her father was sent to a different camp 1,500 miles away called Crystal City Alien Enemy Detention (p. 168). It was not until many years later, when her father was in his late eighties, that Nakagawa was able to hear his whole story, finally learning about those missing years when her father was locked away in a high-security camp. The author writes how she desperately needed to know what happened to him during that time and to learn why the country of her birth had turned on her, her family, her community -- and put "my people in this situation" (p. 141). As readers, we see Nakagawa's account through the eyes of an innocent child as she describes how frightened, confused, and traumatized she was, not just by the forced separation of her father, but also by the imprisonment of so many innocent Japanese Americans. They were simply living their lives as law-abiding members of society prior to Pearl Harbor.

Efforts at Reharmonization: Speaking Out Versus Continued Silence

The author struggled, as did so many, to understand the implications of the world situation and Japan's actions in the war. "While at Minidoka, I knew nothing of the turmoil going on for adults in the concentration camps and the overall treatment of Japanese Americans in the United States. Years later, I would understand the deep divisions in the country and how Americans of Japanese descent were singled out and discriminated against" (p. 126). Despite her family being interned for four years at three different camps, they all survived, Nakagawa believes, because of traditional cultural values surrounding perseverance during times of adversity. She writes: "There is a Japanese proverb that says, 'Seven times I may fall. Eight times I will rise. Those are the kind of people I come from – people with staunch resilience in difficult times" (p. 51). Moreover, speaking out in support of one's basic rights came at a high price. The author recounted how inmates who protested the deplorable living conditions and constant humiliations were "severely punished" and placed in solitary confinement (p. 134). Verbally challenging their inmate status and unjust imprisonment resulted in dire consequences for outspoken Japanese Americans, including those who were U.S. citizens, like Nakagawa's Hawaii-born mother. For many elder internees, the cost for outspokenness was too high.

Years later, with the passage of the Civil Liberties Act (1988), reparations were made to approximately 80,000 Japanese Americans interned during WWII, with the president of the United States, Ronald Reagan, issuing a formal apology for their incarceration (Abelmann, 2009). This outcome came about because internment survivors,

like Nakagawa's father, decided it was time to end their silence about the horrors of internment and publicly share their narratives as evidence of unjust incarceration and societal discrimination. For Nakagawa, there are still untold stories from internment survivors that may never be heard because some victims could not transcend their traumatic pasts. They include Japanese Americans who are "sitting at windows of asylums looking out blankly at nothing, or they have already ended their lives, or they are attacking their wives in unexplained anger or abusing alcohol and drugs. There are the people who have lost their ability to communicate" (Nakagawa, 2019, pp. 142-143). In this context, voice is desirable over continued wordlessness not only for reparations of past wrongs but for restoration of self-worth, self-esteem, and pride in one's cultural identity and ancestry. Moreover, she argues that irreparable psychological damage from experiences in the wartime relocation camps may be the reason some survivors were never able to rise that eighth and final time in the proverb.

Nakagawa's father died in 1987 before the repatriations act passed, but his very moving public testimony ended up assisting many formerly interned Japanese Americans (pp. 234-235). In her closing chapter, DeeAn Nakagawa, the author's daughter, explains that some of the "older generation were too ashamed . . . or the memories were too painful to talk about. Even after reparation payments began, open discussions were more about what to do with the money rather than the full costs of the incarcerations and the loss of livelihoods, family members, identity, and in some instances, voices" (p. 244). Monetary reparations and governmental apologies were given and acknowledged by the Japanese American community, but these could never make up for years of tremendous loss, shame, and pain brought on by institutional racism, mass anti-Japanese hysteria, prejudice against non-white minorities, and forced imprisonment during the war -- and these narratives are but a few examples of the thousands of Americans of Japanese ancestry who experienced similar suffering.

Conclusions

These voiceless heroes of internment have a great deal to tell us. Through the poignant narratives of three Japanese American authors (George Takei, Kimi Cunningham Grant, and Mako Nakagawa, with references to the writings of Shirley Ann Higuchi and Susan Kamei) who experienced internment either personally or through family members, this essay argues that the construct of silence, as a speech act, can serve as a valuable rhetorical device for surviving adversity (pragmatic role), can help individuals to 'save face' and protect one's self-identity, can be viewed as a way of reasserting loyalty to a country at war, and can provide a reharmonization function for those ethnic communities under attack by societal racism and persecution. These authors consider silence in comparison to outspokenness and reconceptualize the construct in terms of generational and cultural differences through the application of message framing theory. The authors' stories, however, are not just about chronicling years of imprisonment in American internment camps, but also about a population's quiet message of strength, perseverance, loyalty, and commitment to community. I posit that silence, as a communicative device that is too-often associated in individualistic societies with notions of compliance, surrender, and lack of voice, is instead a powerful rhetorical device that reflects the tremendous resiliency and strength of message senders – in this case,

Japanese American internment survivors -- and when that silence is later broken for younger generations, it too is sacrificed for the benefit of others over oneself.

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Influence of Policy Instruction and Training on Use of Deadly Force by Police

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Abstract: Use of force by police are gaining deserved attention and scrutiny. Citizens wonder if police use of force is always proportional and necessary. Even though police organizations routinely train officers on proper use of force, how can the public know if use of force policies and training procedures adequately address use of force? With this manuscript, a longitudinal examination of policy instruction on use of deadly force by police begins. Two central questions endured: how do retired officers perceive the effectiveness of deadly force training and how do retired officers perceive training on critical thinking and discretion? Through the course of interviews with retired officers, themes such as, enhanced training, critical thinking development, and proper use of discretion appeared. These areas emerged as most important in avoiding improper use of deadly force by police. We conclude that reality-based training, evidence-based critical thinking skills, and development of proper discretion are advised to maximize proper use of force by police and gain citizens' confidence that force used is defensible and supportable.

Keywords: Police, Use of force, Police policy, Police training and instruction

Introduction

Police officers have the daunting task to maintain order and to protect the public. The 21st century police officer has a harder and more complex task to perform than that of the officer from 40 years ago. The public is not as supportive as they were decades ago, and the modern police officer must deal with constant negative media coverage. We read about the mistakes police officers make, but rarely hear about all the good police do. Two examples of police bravery and selfless heroism are related below.

In November of 1998, Illinois State Trooper (ISP) Neal Merry was on patrol on Route 94, North of Carthage Illinois. He received a call from telecommunications of a pickup truck, overturned in a deep, raging creek. A young woman had lost control on the icy roadway and the truck went off the road, overturned, and came to rest top down in a deep creek that had very fast flowing water making it impossible for the young woman to escape the vehicle. When Trooper Merry arrived at the scene, he dove in the water, climbed on to the truck, pried open the door, and pulled her to safety on top of the overturned truck. Shortly after the rescue, fire department and hospital crews arrived and helped Trooper Merry get the victim into an ambulance. The young woman and Trooper Merry were treated for hypothermia and released from the hospital. Trooper Merry earned an Illinois State Police Medal of Valor for his rescue of the young woman. Nothing was reported in the news media.

In April of 2008, Trooper Todd Adkisson responded to a car crash on Route 67 North of Macomb, Illinois. When Trooper Adkisson arrived at the scene of the crash, the car was on its top, it was on fire, and there was a young man trapped in the car. Two other passengers had safely escaped from the vehicle. Without hesitation, Trooper Adkisson tried to pry open the door of the car to no avail. He broke out the rear passenger side window. The victim's shoes had melted to the floorboard making it difficult to pull the victim to safety. Eventually, Trooper Adkisson was able to pull the young man from the car. The victim's clothes were on fire and fearing possible spinal trauma, Trooper could not roll the victim to put out the fire. Instead, he used a coat and his hands to smother the fire. The young burn victim was suffering from massive third degree burns and was air lifted for treatment at a burn unit. Trooper Adkisson received second and third degree burns on his hands and wrists. He was off duty for three weeks recuperating from his injuries. The young man who was rescued survived the incident, went through multiple surgeries to help heal his wounds, and is alive and healthy today because of the heroic efforts of Trooper Adkisson. For his courage and selfless actions, Trooper Adkisson was awarded the Illinois State Police Medal of Valor, the Governor's Medal of Honor, and was named the International Association of Chiefs of Police 2008 National North Region Trooper of the Year at a special ceremony in Washington, DC. Nothing was reported in the media.

The two ISP Troopers have subsequently retired from the Illinois State Police and their efforts are simply examples of the many thousands of positive actions the police do every day. Unfortunately, the media does not see these heroic deeds as worthy of reporting. However, the media bombards the public with any inclining of something negative occurring in police work.

In some cases, the incidents definitively need to be publicized so that these incidents never occur again. Incidents like the one where in April of 2015, South Carolina Officer Michael Slager pulled over 50-year old Walter Scott for a broken taillight and Scott tried to run away from Slager because there were family court issued warrants for Scott (Campbell, 2015). Scott tried to push away from Officer Slager, the officer used a Taser on Scott, Scott pulled the Taser from the grasp of Slager, and as Scott walked away from the officer, Slager shot Scott in the back multiple times (Campbell, 2015). Officer Slager was charged with murder and has been fired from the police agency (Campbell, 2015). It was abuse of power like this that the public has the right to question and demand

justice. This case represents a glaring abuse of police authority and a goal of this study is to help better prepare police officers for deadly force encounters.

The problem discussed in this study was the training that ISP troopers receive may not be perceived as adequate because it does not include critical thinking and the use of discretion (Morrison & Garner, 2011). Without practical application experience within the context of the training, training may not be optimal (Thomasson et al., 2014). Not to mention, research related to use of deadly force by the police is not a new phenomenon, but historically there has been no systematic data collection effort by governmental agencies related to police use of force (Matusiak, Cavanaugh and Stephanson, 2022). The purpose of this qualitative exploratory case study was to explore retired Illinois State Police (ISP) Troopers perceptions of the inclusion of critical thinking and use of discretion in their deadly force policy training (Sekhon, 2011). Two central questions guided this study:

RQ1: How do retired ISP Troopers perceive the effectiveness of their deadly force training in preparing them for shoot or do not shoot training?

RQ 2: How do retired ISP troopers feel that their training adequately includes the application of critical thinking and the use of discretion?

Additionally, it's often understood that good examinations of police tactics and techniques should include

(a) real-life data and information such as the number of incidents in which police officers discharge firearms at citizens;

(b) the demographic characteristics of the officers and citizens involved in each incident;

(c) the agency/agencies employing the involved officers and location of each incident;

(d) the particular weapon(s) used by police and citizens; and

(e) the injuries, if any, suffered by officers and citizens (Matusiak, Cavanaugh and Stephanson, 2022). That is another highly useful element of this particular study.

Central to the study is the critical thinking element of policing (Makin, 2016; Phillps & Burrell, 2009). For this study, critical thinking can be viewed as reasoned thinking with a purpose. In this study the purpose is the police use of reasoned thinking to best deal with deadly force encounters (Helsdingen, van Gog, & van Merrienboer, 2011). The lived experiences of Illinois State Police officers who have been trained in the use of deadly force and have had experience with applying the deadly force policy were willing to tell their stories. The participants are retired troopers of the Illinois State Police. The findings from the retired police interviews provided insights into the effectiveness of their policy training programs. The value of the study findings has resulted to informing the department of the findings to foster reviewing ISP police deadly force training for effectiveness of the policy training curriculum. Research conducted still support the theme of this study that critical thinking is indeed an integral part of police decision making (Isaza, McManus, Engel, & Corsaro, 2019. Ridlehoover, 2020).

What's more, a contemporary research study examined what police officers experience during incidents, of stress primarily on perception and memory, and post-incident experiences. Apart from basic reviews on the effects of stress (such as officer involved shooting - OIS) on perception, memory and decision-making during OIS, most

research studies lack the detail or data to drive tactical, training, equipment and even future legislation change (Petersson, Bertilsson, Fredriksson, Magnusson, and Fransson, 2017). Yet, again, while this was another highly useful element addressed in this study some of today's police instructors believe police training may be broken and needs to be updated, like the first study called for (Preston, 2020). In her article Caroline Preston advised that the training of law enforcement needs to start at the college level and that the college instructors need to take responsibility for what they teach future public servants (Preston, 2020). This is a stand that Daugherty, Bitner, and Ekici heartly endorse and respect. The Chancelor of California's community college systemrelated, "Colleges need to "take personal responsibility and personal accountability. We cannot sit here as educators and say the problem is somewhere else. If the college system determines that any police academies are not committed to making needed changes to their approach and curricula, he said, "then we need to sever that relationship (Preston, 2020)." In other words, police academies, colleges, and the police educators need to take responsibility and reform how police are educated and trained so that there is never again an incident where George Floyd is trapped and tortured under the knee of a police officer (Preston, 2020).

Further, this literature review revealed that there is a vast amount of literature on studies about deadly force in law enforcement, but little on the effects of education, instruction, and training on deadly force. The literature review included peer reviewed journal articles on deadly force from a variety of stakeholders' perspectives including police instructors, police training policy administrators, and the effects of the policies and training on police officers. When research was conducted to update the information regarding the effects of deadly force education and training on the use of deadly force, there was still little research articles on the subject. One 2020 article however, did support this papers findings that deadly force training needs to be taken seriously and police need to better prepare on when to use deadly force (Dima, 2020). According to professional police instructor Darryl Rivers, "Everyone leans to [being] overly passive now because no one wants to use force nowadays and the citizens know that. That is a major problem. I know officers that absolutely love their job, but they're scared to do it now (Dima, 2020." Thus, it would appear that Rivers is opening a door for additional studies examining on whether or not fear of using deadly force is endangering modern police officers.

Additionally, publications by experts on deadly force examinations, popular press publications, and credible internet resources were also subjected to review. This research provided information on what problems confront police employees when faced with deadly force training, education, instruction, and police issues. The literature review provided insights into how deadly force management affects morale, production, public reactions, and organizational success.

The operational definition of deadly force is that force which is likely to cause death or great bodily harm (ILETSB, 2011b). Controlling how police officers are properly trained to deal with deadly force encounters is the responsibility of the curriculum writers and police supervision. The essential need for ascertaining that training is effective is supported by statistical data involving deadly force issues. In one quantitative study, the data collected showed that 91.5% of officers were killed by firearms (Charles & Copay, 2002). In another quantitative study,

65% of the officers' shots missed the intended target (Charles & Copay, 2002). When officers draw their weapons, they often miss their target more frequently than they hit it when in deadly force encounters. The need for effective training is highlighted when situations like this occur (Charles & Copay, 2002).

Perhaps, by embracing uncomfortable but necessary conversations around police training and how police training & service systems have developed or evolved to either support or fail individual officers can result in in improved outcomes for its citizens in need of support. By reframing gaps in training as a police and service to community issue, instead of just a mandated government system, the human services side of policing may create better outcomes for all (Morfoot & Pollack).

In fact, a recent study, using real people to role play in police training situations found this training style to be superior in improving stress management, tactical shooting performance, and training effectiveness. The study concludes that real-life training scenarios that closely mimic high stress situations can significantly improve police perceptions of physiological and psychological stress leading to safer productive outcomes (Liu, Mao, Zhao, and Huang).

Methodology

A qualitative exploratory study was used for this research on how officers feel about their deadly force policy training. This case study approach provides police officers the opportunity to discuss how deadly force training pertains to the everyday functions of police work. The case study method was used because it provides for a process of research whereby there is an intense analysis of a person or community. The developmental factors of the person or community in relation to their environment can be defined but not numerically analyzed (Gerring, 2004). This study is an exploration of the question of whether more training can help officers better prepare for deadly force issues.

Over a 33 year-span of the career in law enforcement, the lead interviewer for the study was involved in educational leadership and formed distinct opinions on what constitutes effective training. The challenge was to decide on a research methodology that would remove as much of the researcher bias as possible. Computer assisted qualitative data analysis software (CAQDAS) like NVivo 10 were designed to assist researchers in data storage and analysis, research management, and theory development (Gibbs, Friese, & Mangaberia, 2002).

To control for bias in interpreting participants' responses, the interviews were tape recorded and member checking followed to clarify and verify the exact words of the respondents (Kellett, 2005; Lincoln & Guba, 1985). The words and phrases were then entered into the NVivo 10 software which was used to identify and analyze the major themes in the remaining interviewee Word documents (Baugh, Hallcom, & Harris, 2010). By entering exactly what the respondents said into NVivo 10, a researcher's opinions will not influence the data gathered (Bourbon, 2002; Crowley, Harre, & Tagg, 2002; Welsh 2002).

The study samples were drawn from retired troopers of the Illinois State Police Department. The Illinois State Police Department consists of 21 districts and one administrative district (ISP, 2013). As of 2013, the ISP has over 3,000 employees with 1,781 being sworn troopers (USDOJ, 2013). The ISP demographic composition consists of 91% male, 9% female, 80% white, 13% African-American, 6% Hispanic, and 1% Asian (LEMAS, 2000). There are also 1,424 retired Illinois State Police officers who belong to the ISP Fraternal Order of Police Lodge 41 and these retired officers were solicited for participants for this study (ISPFOP, 2016).

The samples for interviews were solicited from the members of the retired Illinois State Police (ISP) Troopers. The study samples included both male and female, varied ethnicities and age groups. The samples consisted of retired troopers that include representatives who had served in multiple districts of the ISP. The sample size of the participants at the beginning of the study was anticipated to be 20 to 30. However, saturation of data was achieved at 22 participant interviews which provided the necessary data for the study. Retired officers were selected from those who had retired 10 years or less.

Confidentiality in this research is based on contemporary ethics codes that provide guidance against unethical experimentation, that participant inclusion in a study is voluntary, and that their identities are protected (Perlman, 2004). Confidentiality is very important because the researcher in any study has an obligation to protect the participant's privacy, their anonymity, and to eliminate any information in the study publication that may lead to a deductive disclosure of the participant's identity (Cohen, Mannion, & Morrison, 2011; Kaiser, 2009). To ensure the confidentiality of the participants contact between the researcher and the participant was by telephone or in person at a location chosen by the participant. Voluntary participation, responsible information, and the competence of the researcher are the key elements for ensuring that the participants provide honest responses (Lambert & Glaken, 2011).

It is essential that the willing participant in any study is completely apprised of all information pertaining to their part in a study and they must be told if there are any risks involved in their participation (Lambert & Glaken, 2011). Each participant was presented with the University Informed Consent form to review and sign if they wish to participate in the study. The informed consent forms include the explanations that the participant must understand the nature of the study and that he or she must be 18 years or older to participate and they must not be a member of a protected class. The age requirement is very easy to accommodate because the retired Illinois State Troopers were 50 years of age or older. The participants were advised the participation is voluntary and they could withdraw from the study anytime they may so choose.

The data collection instrument includes both the interviewer and interviewee. When the researcher is a human, and not a data collection instrument, complex situations can be more deeply comprehended (Barrett, 2007; Lave & Kvale, 1995). Social research benefits from the interaction between the researcher and the individuals being studied and the researcher can comprehend the important aspects of human life (Burgess, 1984; McCracken, 1988).

Table 1. Participant Demographics for the Study

Demographic Characteristics		Participant	Total Participants	%	
Gender	Male	20	22	91	
	Female	2		9	
Age	50-55	10	22	45	
	56-61	9		41	
	61-65	3	22	14	
Race	White/Caucasian	22	22	100	
Worked 1 District Entire Career		12	22	55	
Worked More Than 1 District Entire Career		10	22	45	
How Long Retired	1-5 Years	15	22	68	
	6-10 Years	7	22	32	
Use of Deadly Force by Participants		Number of Participants		%	
Never Used Deadly Force During Their Career			20	90	
Used Deadly Force During Their Career			2	10	

The two research questions and the corresponding interview questions were:

RQ1: How do retired ISP Troopers describe the effectiveness of their deadly force training?

1. How recent was your last training session on deadly force?
2. How well was the current policy explained?
3. How well did you know the policy before the training?
4. How well did you actually understand the policy?
5. To what degree did your training prepare you for the actual use of deadly force?
6. To what degree did your training discuss using a weapon?
7. Have you ever been through a scenario or event where you had to apply the deadly force policy?
   a. How effective was the scenario of event?
   b. Did it change how you prepared for such an event?

     c.   How much discretion was involved in the event?

8.   How effective is the current training on deadly force?

     Very Effective   Somewhat effective   Neutral

     Somewhat ineffective   Very ineffective   No opinion

RQ 2: How do retired ISP troopers feel that their training adequately includes the application of critical thinking and the use of discretion?

1.   How did your training help you in developing the critical thinking skills for deadly force application?

2.   To what extent did your training include a discussion on the role of discretion?

3.   How did your training help you in understanding the role of discretion in shoot/don't shoot situations?

4.   How much discretion do you have to decide whether to use deadly force?

5.   To what degree did your training prepare you for the actual use of deadly force?

6.   How would you improve the training on deadly force?

The data gathered through the research was imported directly into Nvivo from a word processing package and then the data was coded on screen (Welsh, 2002). The coding stripes were visible on screen and the researcher was able to write memos concerning particular aspects of the data to link the pieces from different data documents loaded into the NVivo (Welsh, 2002). This data was be collated using the NVivo 10 software that organizes the data into a priority order of recurring themes. The interviews were transcribed into Word documents using a software application such as Dragon Dictate. Dragon Dictation software was used by the researcher by speaking into a microphone and playing the recorded tape into the microphone, and the Dragon Dictation transcribed the speech into a word document (Matthews, 2011). The Word documents were uploaded into NVivo 10 where they were analyzed for common themes.

In qualitative studies, to ensure that the guidelines of validity and reliability are achieved, the concepts of credibility, dependability, conformability, and transferability are applied to the study (Denzin & Lincoln, 1994; Denzin & Lincoln, 2012; Lincoln & Guba, 1985, 1994; Moustakas 1994). Credibility in this study was achieved by continuous collaboration with the participants to ensure that their recorded responses are completely accurate. Bracketing was used in this study to ensure that dependability is achieved. Bracketing involves putting aside one's own belief in and what is personally known about a phenomenon being investigated along with open-ended questions to ensure the participants provide their views, not the researcher's (Carpenter, 2007; Zenobi, Yuen-ling, & Wai-tong, 2013). Member checking was employed to strengthen validity by clarifying and verifying the exact wording of the participants which also helped to establish credibility.

The best way to achieve conformability is for the researcher to have a system of comprehensive record keeping and data preservation for potential scrutiny at a later time (Lincoln & Guba, 1985). The audit train suggested by Lincoln and Guba (1994) calls for the machinery for broad assessment of the research conduct by preserving

records throughout the research process. A concise and regulated audit and record keeping process was used to preserve all data collected so further scrutiny of the data can be achieved at any time.

The element of transferability can be established when the study results can be generalized, used, or replicated to other conditions, populations, or situations (Lincoln & Guba, 1985). Transferability can be achieved because the data results from this research study will be able to be applied to any police agency administrator who wishes to determine if their personnel are satisfied with the deadly force training that they are receiving. The administrator can easily transfer the methodology of this study and modify it to their needs and conduct their own study.

Analysis and Presentation of Data

Content analysis included analyzing the data for elements related to training effectiveness and deadly force preparation. The first step was to make a list of all the words and phrases that applied to training needs and were related to the two research questions. The raw data, when analyzed produced a list 57 words and phrases which were then further analyzed for similar meaning and interpretation. The words in the list were then combined for similarities and reduced to a smaller list of 30 words. The second list was then reduced to 18 words and phrases which then became the query for NVivo.

The final list was entered into a query in NVivo software where further analysis was performed. The transcripts of the participants' responses from the interview questions were fed into the NVivo 10 qualitative analysis software. When the query of words and phrases were applied to the documents, four dominant themes, or nodes, were derived. The following are the four emergent themes.

Theme 1: Reality Based Training Needed

All 22 participants reported the need for more reality-based training. Any training that required analysis of a situation, movement, reaction time, real life concepts that challenged the mind and the body were identified as training that could better prepare them for deadly force encounters. This reality-based training included active shooter training where the troopers went into a building and role played like it was an actual event. Role players were either troopers or offenders and both sets of role players reacted to situations that were presented. The active shooter training scenarios mirrored what the officers would face if they were to encounter an actual active shooter in a school or on patrol. One participant mentioned that such scenarios provided the officers with an example of what was happening in society at any given time. The additional research conducted after the publication of the first article revealed that reality-based training is still viewed as necessary by several newer studies. Additionally training time must be more effectively used and focused on. In other words, police training time must be used as effectively as is humanly possible (Cushion, 2020; Staller, Koerner, Heil, Klemmer, Abraham, & Poolton, 2021).

Theme 2: Critical Thinking Training

Fourteen of the participants believed that the training they received in their careers to a certain degree helped to increase the critical thinking skills necessary to make sound decisions in deadly force encounters. Four believed that the ISP training only provided minimal training regarding the development of critical thinking. The consensus of the 14 retired troopers was they felt that the training helped them to develop the critical thinking skills to apply policy and the law to determine the proper course of action in deadly force encounters but indicated that critical thinking could be emphasized in more depth. The remaining participants believed that the training focused very little if any on critical thinking development. Six participants related that there was no critical thinking application involved in the training. One participant advised that the department should be more focused on liability issues. Lastly, two participants revealed that they believed that they did not learn how to apply critical thinking skills to policy interpretation at all during training; but they acquired critical thinking skills through on the job experience.

Additional research on this theme for the original study revealed that the critical thinking is indeed a popular research topic for many researchers concerned with police professionalism. According to one researcher, "Officers' response times in such a situation directly relate to how quickly they can sort through a sea of stimuli during a lethal encounter. The subsequent reaction depends upon their observation and decision-making abilities. Although some choices must be made in an instant, others allow more time to think about the best course of action. In both cases, critical thinking is vital to the safety of both the officer and the community" (Ridlehoover, 2020).

Next, another article called for robust critical thinking into all law enforcement agencies so that all officers learn to think within multiple viewpoints; to improve their ability to reason fairmindedly; to cultivate ethical virtues into their minds; to avoid faulty assumptions that lead to poor judgements; and to learn the barriers to critical thinking." (TFFCT, 2020).

Theme 3: Policy Limits Discretion

Six participants believed that the training they received was thorough and incorporated meaningful discussions on discretion. The remaining 15 participants felt that the discussions on discretion did not exist in training, were very minimal, or were barely adequate. One participant related that he understood the role of discretion in critical incidents, but he felt that others in the training sessions were in the fog regarding discretion.

However, 16 of the 22 participants believed that the only limits on discretion are the law and policy. The consensus of these retired troopers was that it was left up to the individual on how to respond to a deadly force encounter and the only limitations were provided by the law and policy. Since no laws or policy can possibly give a definitive guide on how to respond to every possible situation, a police officer could ever encounter, the officers had the discretion to react as necessary provided they did not violate the guidelines of the law and policy. One participant related that he felt that policy was far more restrictive than the law regarding deadly force, but it was still left up

to the officer on how to handle a deadly force encounter because it was the officer making the second-by-second decisions in the field. Another participant however, believed that he had very little discretion when it came to deadly force application because he felt that the department discouraged the use of deadly force. He also believed when he was shot, he had no discretion because he had no other option but to use deadly force or he would have died.

One of the important elements that was still very valid since this first study was conducted was that police discretion is as important today as it was yesterday. There needs to be a clear-headed approach to police discretion; the advantages and disadvantages of police discretion need to be clearly understood; and the police need to be accountable for their use of discretion (McNally, 2020; Miller, 2020; Turner & Rowe, 2020).

Theme 4: Training Improvement Needed

Twelve participants, 54.5% would like to see more reality-based training incorporated into training. These participants believed the active shooter, FATS Machine, Sims training, should be used more than once or twice a year to be truly effective. Four participants wanted more repetition in the training sessions to ensure the trainees had achieved a good understanding when the training session was completed. Six participants related that part of each training session should include critical discussions on personal deadly force encounters or current event encounters across the nation.

Videos of shooting encounters by police officers could be viewed and the viewing officers could provide feedback on the positives and negatives on these encounters. This would help them to better understand ramifications of decisions made by officers and can help to increase their understanding of discretion in these encounters and help to develop their critical thinking abilities. Two participants simply desired the department to develop better instruction on critical thinking and discretion regarding deadly force encounters. They believed that there cannot be enough emphasis placed on critical thinking and discretion development.

Another refreshing element that has continued to emerge since this study was conducted is that reality-based training and police training needs to evolve. Reality based training will definitely better prepare the police officer better deal with deadly force decisions (Thorne, 2020). This training helps prepare officers to effectively deal with dangerous felons, people with schizophrenia, autism, suicidal ideation, and other dangerous individuals (Schmelzer, 2020).

Conclusions and Recommendations

It is difficult to express in words what an officer feels when confronted with a deadly force situation. Police officers, from day one of their careers, are trained to be in control, to be definitive change agents for public altercations and disagreements, and to direct social change (Peak, 2012). They must use their training, knowledge,

skill, creativity, empathy, and moral foundations to deal with whatever situation effectively, successfully is presented to them. Officers are trained to be problem solvers (Peak, 2012; Geller & Swanger, 1995).

The results from the four themes established the need for deadly force training that incorporated reality-based training, more focus on critical thinking development, more training and discussions on discretion, and that discretion for police officers was limited by the law and policy. The results also revealed that 20 out of 22 of the participants never had to use deadly force against an assailant. The findings of this research study can encourage law enforcement leaders and educators of the Illinois State Police to incorporate more discretionary, critical thinking, and reality-based training for their personnel. These findings can assist the police officers in making better decisions regarding the use of deadly force in the field.

Deadly force policies can give great direction for police, yet if it restricts an officer from accomplishing their job function, then the consequences can result in a negative outcome (Broome, 2011; Thompson & Dowling, 2001). However, it takes more than a good policy to aid police in effective decision making. It also takes a well written curriculum on deadly force instruction, proper classroom education on the policy, and many hours of hands-on training to accustom officers to the stresses of deadly force encounters (Cordner & Shain, 2011; Thomasson, Gorman, Lirgg, & Adams, 2014).

This study revealed that the participants believed that more reality-based training is needed to improve their responses to deadly force situations. Essentially practice makes perfect and though perfection is not attainable, the more the officers train the better prepared they become when they encounter deadly force encounters. Future studies could research how much training, how many hours, is needed to help officers to react to deadly force like it is second nature to them.

The participants also believe that more discretionary and critical thinking training is necessary to help them work through deadly force situational encounters with the best decision- making processes possible. For this study, critical thinking can be viewed as reasoned thinking with a purpose and the purpose in this study is the police use of reasoned thinking to best deal with deadly force encounters (Helsdingen, van Gog, & van Merrienboer, 2011). The more experience the officer has with using their critical thinking abilities to make the best discretionary decisions the better the outcomes for the deadly force decision making process.

Future research can focus how to best incorporate critical thinking and discretion into training. Is it best to train these skills in the classroom, is it best during situational scenarios, or is a combination of both best for the officers? This future research can be an attempt to ascertain how much additional training is necessary to best prepare officers to use these skills during deadly force encounters. Due to the vast variety of deadly force objects including knives, sticks, keys, pencil, bottles, cars, trucks and practically anything could be a weapon, police deadly force training should be updated at least quarterly.

Additionally, this study can be replicated by any law enforcement agency throughout the nation that wishes to improve the training of the department for the betterment of their officers. Each agency could modify the research to best fit the needs of the particular agency. Questions for these studies could be more structured to ascertain how to specifically improve areas of training that would benefit the unique training requirements of each particular department. The perceptions and feelings of their officers could also help the department administrators and educators to create better policies and curriculums for deadly force training.

Notes

This is an exploratory research manuscript, developed in part from a dissertation (Influence of Policy Instruction on Police Use of Deadly Force: Exploratory Study, 2016, University of Phoenix by current author Glenn Daugherty), and draws on modernistic policy research, program evaluation, and solution-based knowledge to begin a longitudinal examination and assess policy changes on use of deadly force by police.

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Whiteness and White Characters in *Good Times*

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Abstract: Tandem/TAT Productions (headed by Norman Lear and Alan "Bud" Yorkin) along with MTM Enterprises (headed by Grant Tinker) dominated American television programming in the 1970s producing many successful situation comedies on the CBS network. Kirsten Marthe Lentz notes that while both production companies were credited with "transforming the situation comedy, making it more complex and more responsive to the social and political changes resulting from the civil rights and black power movement and the burgeoning feminist movement," the television industry adopted two kinds of terminologies for describing these new shows. MTM grew to represent "quality television" while Tandem/TAT represented "relevant programming." Lear's sitcoms generated much discussion among journalists and viewers commenting on their treatment of race and racism and American racial politics in general. It is this point of departure that is particularly significant regarding Lear's three seventies Black-oriented sitcoms, *Sanford and Son*, *Good Times*, and *The Jeffersons*. Performing a close analysis of representative episodes, this paper examines Lear's treatment of whiteness in *Good Times* showing that the series engaged with whiteness in three fundamental ways: narrative, communicative, and performative.

Keywords: *Good Times*, African Americans, 1970s, Situation comedy, Whiteness

Introduction

The situation comedy *Good Times* broadcast on the CBS network from February 8, 1974, to August 1, 1979, is a television milestone because it was the first series to feature a recurring, intact Black two-parent nuclear family, the Evanses, on American primetime television for three consecutive seasons (Merritt and Stroman 493). In the conventions of seventies "TV World," the "intact Black nuclear family" is a married, heterosexual, two-parent African American family with children all living in a single dwelling at the same time. The Evans family was unapologetically Black in their televisual presentation. They physically appeared to be "Black" with their combination of rich brown, warm caramel, and coffee-shaded skin tones and "natural," chemically unprocessed, and chemically processed hairstyles. The Evans family also sounded "Black" with their use of Black orature, aphorisms, vernacular, and dialect. *Good Times* situated the family in a pluralist context—a Chicago public housing project that formed a "separate-but equal" world with circumstances that essentially paralleled those of whites without disrupting and challenging the dominant narratives about American society (Gray 87).

This paper examines executive producer Norman Lear's treatment of whiteness in *Good Times* showing that the series engaged with whiteness in three fundamental ways: narrative, communicative, and performative. Performing close analyses of several episodes, I lay a foundation for seeing the white characters in *Good Times* as a new type of representation prefiguring representations of whiteness that would remain in dialogue with white characters in future Black-oriented sitcoms. Ultimately, Lear's use of white characters in *Good Times* for a composite persona representing the disposition and desires of a fictional 1970s White Male Liberal in a changing, divisive, multicultural American society.

The Evans family consisted of Florida Evans, the loving wife and mother, played by Esther Rolle, star of the series; James Evans, Sr., the hardworking husband and father, played by John Amos until 1976; James Jr., or J.J., the eldest son, played by standup comedian Jimmie Walker; Thelma, the middle child and daughter, played by acting newcomer Bern Nadette Stanis; and Michael, the militant youngest son, played by *Raisin in the Sun* star Ralph Carter. Ja'Net DuBois was cast as the family's neighbor and Florida's best friend, Willona Woods. One accomplishment of *Good Times* was its ensemble cast of African American actors on primetime television. Through this cast, often, *Good Times* displayed newer, recurring empowering images of Black women, men, and youth. Within the primary framework of race, *Good Times* also constructed and engaged with whiteness. While images of African Americans in the series were generally positive overall, images of white characters were generally benign, negative, and stereotypical. Members of other racial and ethnic groups such as Latinas/Latinos did not appear in guest or supporting roles. One Asian American woman appeared in "Florida the Woman" at a Japanese restaurant accepting Florida's meal order and serving to Florida her food and beverage.

Herman Gray downplays the role of whiteness in series such as *Good Times*. "Although blackness was explicitly marked in [*Good Times*], it was whiteness and its privileged status that remained unmarked and therefore hegemonic within television's discursive field of racial construction and representation" (79). Although subsumed by color-blind racism, I argue that whiteness and its privileged status *is* marked in *Good Times* while at the same time being hegemonic. I think an examination of white women and men in *Good Times* is warranted because just as the images of African Americans are told through the governing creative voices of its white and Jewish men and women producers, the images of whiteness as well.

The Evans family interacted with white women and men in such roles as public housing commissioner, entertainer, social worker, and medical doctor. The Evans family treated white characters with bemusement, irony, and ridicule but also with respect, fairness, and equality. *Good Times* had no white characters in recurring roles as did *Julia* and her neighbors the Waggedorn family and *The Bill Cosby Show* and the high school teachers at Chet Kincaid's place of employment. White characters in *Good Times* appeared in transient roles—the guest starring role and the small but necessary role (Taflinger 41-2). White characters sometimes fell within a "parade of dumb or insensitive public officials" with which the Evans family and Willona contended (Taylor 83).

Narrative Strategy

Within the narrative strategy, whiteness, color-blind racism, and the effects of intergenerational white supremacy in *Good Times* is an object of derision, satire, and commentary. For a humorous—although yet critical—affect, the smart, militant youngest son Michael hails and engages with whiteness. Michael represents Black power ideology (Acham 136-7). He frequently comments on the effects that the intersection of whiteness and various oppressive social structures and systems in American society have had on African Americans. While he frequently comments on these structures and systems within his family, at his school, and through letters to newspaper editors, his family does not take him seriously. In the first two seasons, a verbal running gag connected to Michael was his resistance to his parents calling him "boy" (Hough 204). His response is always: "Boy is a white racist word!" By implication, Michael is aware that white slave owners purposely referred to enslaved Black males as "boy." The name "boy" served to condescend to and to emasculate Black men, thereby, reinforcing daily the social ineffectiveness of enslaved Black men and reminding them of their place in the social order in comparison to white men. Accordingly, off-screen, Lear knew that hard-hitting socially relevant issues of race spoken by a young adolescent stood unequally with commentary by adult or older adolescent characters. With Michael, viewers had the option of overlooking, minimizing, downplaying, undervaluing, trivializing, discounting, or disparaging his commentary.

Plots involving Michael's militant commentary often centered the American educational system in such episodes as "IQ Test," "Michael Gets Suspended," and "The Crosstown Bus Runs All Day, Doodah, Doodah." In general, Michael has a mature outlook on race relations in the United States. For example, he sees the hidden motives of a white woman's sorority before the family does in "Thelma's Scholarship." Thelma receives a scholarship offer from Alliston School for Girls, a private boarding school in Michigan "that happens to be the highest-rated high school in the state." The school sounds like a "snob school" to Michael. Thelma shrugs off Michael's comment instead expressing joy that the school is offering scholarships to "needy Blacks" such as herself. To which Michael corrects Thelma saying, "you mean *token* Blacks." James tells Michael, who is often named the "militant midget," to "cool it." Cindy Bradford, played by Randi Kallan, a white woman, visits Thelma at home on behalf of her sorority, Zeta Gamma, to invite Thelma to their first rush party. After Cindy blurts out that the sorority "*needs*" Thelma and that "she understands" the family's economic disadvantages, Thelma and her family begin to see Cindy's true motives. In the end, the family realize that Michael was right in the first place.

In general, white characters interacted with the Evans family through the prism of color-blind racism. For example, in "The Judy Cohen Story," Black and white patrons attend a talent show, which included one of J.J.'s new clients, played by Judith Cohen, a white woman, playing herself. Judith is self-deprecating but accepting of J.J. and his Black family. It is interesting how accepting Judith is of J.J. and of how accepting J.J. is of Judith. Also, one must ask if there were any such "mixed race" nightclubs in Chicago in the early 1970s, especially since residential segregation in Chicago dating back to the late nineteenth century was still influential into the

1970s. In "Write On, Thelma," Thelma's white female teacher, Ms. Flicker, visits Thelma's home twice. Once to tell Thelma that her play won a prize and second, to rehearse Thelma's play with her family. Thelma lives in a public housing project that mainly houses African Americans. It seems very unlikely that a white woman would come or come alone to her student's home to discuss the student's homework, especially a Black student who lives in the "ghetto."

Communicative Strategy

Good Times also operationalized a communicative strategy to engage with whiteness involving white characters. Emphasizing the ways that Black and white characters communicate with each other, three common communicative strategies highlight a rhetoric of whiteness—mimetic, ironic, and incidental. In the mimetic engagement of whiteness, the Evans family holds a mimetic relationship to the white character. That is, they are on equal footing or in a slightly higher social status in their relationships with white characters such as in "The Judy Cohen Story" and "Write On, Thelma."

In an ironic engagement of whiteness, the series parodies white fear of Blackness such as the fear of Black criminality in "The Visitor." In this case, the white male housing commission official played by Richard B. Shull is not familiar with Black culture and is apprehensive about being in the home of the Evans family. He is visibly afraid widening his eyes when he realizes that he may have to spend the night with the Evans family because gang warfare outside the housing project will make it impossible for him to leave. Ridicule towards the housing official from the Evans family ushered from this situation.

In an incidental engagement with whiteness, the series comments on whiteness by the casual or brief encounters the family has with white characters. For example, in "The Judy Cohen Story," two agents would like to book J.J.'s new client Judith. These agents are white men. The men speak very few lines, but the audience quickly recognizes the realm of power and privilege these men hold in comparison to J.J. One of the white agents had cornered the market on entertainment outlets that J.J. knew that if available to Judith, would propel Judith's career forward. In a moment of awareness, J.J. insists that Judith signs with the white agent, telling his family that he let Judith go because he felt that she would be a difficult artist to manage.

Performative Strategy

Like the communicative strategy, the performative strategy also explicitly marked whiteness in *Good Times*. It involved visual, gestural, and aural signaling of white characters especially when in the Black space of the Evans home. This signaling included the display of wide eyes, rolling eyes, raised eyebrows, and condescendingly sarcastic, ironic retorts and language. Whiteness is mocked in a reversal pattern in "I Had A Dream" where J. J. dreams he is white. In the dream, J.J., his family, and co-workers interacts with the white J.J. The white J.J. gestures and vocalizes a kind of "Blackness" while at the same time visualizing whiteness.

Conclusion

In conclusion, as was the style of Norman Lear, *Good Times* was topical highlighting current issues such as hypertension in Black men and racism in American society. Its topicality serves as a refracted accounting of seventies America and white-authorized representations of African Americans through the creative authority of white and Jewish American male and female producers. White characters in *Good Times* are benign. Even in their benignity, they stood in as the white male liberal who is colorblind, completely adjusted to social change, and empathetic of the plight of poor urban Blacks. White characters served as racialized "human props" allowing Black characters to be the "Subject" Lear envisioned Black people to be in the series.

Thank you for your interest, time, and attention!

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Change and Resistance to Change during COVID-19

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Abstract: Organizations often encourage their employees to challenge the status quo toward improved operations and better use of resources. Many leaders agree that change is necessary for the survival of the organization. Employees, on the other hand, tend to resist change and maintain their comfort zone. Under the COVID era, organizations, leaders, and employees find the change to be crucial for survival. Organizational change – related to the pandemic is now accepted by most and embraced. Pre COVID, people resisted change for a variety of reasons. Job security, fear of failure, and organizational politics have created a culture of uncertainty and misunderstanding. Once the change is implemented and accepted, employees resist turning back. During the early period of the pandemic, the lack of accurate information and assumptions encouraged resistance to organizational change. The devastating cost of COVID, its impact on the economy, and media coverage have emphasized the critical need for an immediate change. Internal and external actions and events urged businesses to respond. Accurate predictions of these events lead to accurate decision-making and consequently to accurate organizational change. The lack of accurate information under COVID leads to poor decision-making and uncertainty.

Keywords: Change, Resistance, COVID-19, Leaders, Employees

Introduction

Organizational change can be introduced and implemented successfully with sound leadership that inspires trust. Maintaining positive and clear communications helps restore employees' faith in management. Great leaders emphasize their commitment to regaining their employees' trust through conveying accurate information about the need and nature of the change to their employees. Once the change is implemented, employees should be offered a support system to care for their mental health. This is particularly true under COVID due to the stress created by the pandemic.

Understanding Change

People can agree that the only constant in life is change, and yet, it is feared and resisted. For an organization to introduce and successfully execute change, it must identify the new desired status, and the time and resources needed. Employees' buy-in is especially important. All those impacted by the change must be involved in

planning the new status. Their feedback creates ownership and commitment and reduces the overall resistance to change. Understanding change is the first step toward successful introduction and implementation. Robbins et al. (2013) defined organizational change as an alteration in structure, people, and technology. Changing structure impacts the authority that select employees would have to improve processes and/or change products. They would control job redesigns and can identify and solve problems related to the new organizational change. Chang in people refers to positive changes in their attitudes and behaviors. They become more committed to continuous improvements that lead to high-quality outcomes. Leaders are responsible for supporting their employees by providing education, training, and a positive recognition and rewards system based on employee performance and attitude. Change in technology includes changes to the equipment and work methods. It helps streamline processes and enhance employees' knowledge and skills.

Under COVID, organizations faced many challenges and uncertainty. The rapid spread of the virus has created an evolving need to change the way we live and do business. Change became the new norm and resistance to change under the pandemic became morally and socially unacceptable. A 2021 Pew Research Center survey asked the American public about their reactions to the pandemic during the previous year. Around 89% of the respondents (more than 189,000) reported at least one negative change in their day-to-day lives and about 79% stated there was at least one positive change.

Overall, the respondents revealed that the pandemic is responsible for making changes in their lives in the areas of relationships, activities, physical and emotional health, society and politics, work-life balance, and finances. In relationships, the way people engage with each other has changed. While 41% of the respondents reported missing the human touch of the people in their lives, 33% reported a positive impact on their relationships with their friends and family - due to spending more time at home and are no longer required to go to school and work. Regarding activities, 32% reported that the pandemic is responsible for distributing their hobbies and routines - travel and quarantine restrictions were the primary focus of responses. Concurrently, 26% of the respondents have reported that staying at home allowed them more time for relaxation, developing more hobbies, and completing unfinished projects around the home. In the area of health, only 14% of the respondents have reported improvements in their mental and physical health due to the positive lifestyle changes under the pandemic - the extra time at home allowed for positive changes in exercise and eating habits. In contrast, 28% of respondents have reported declining physical and mental health due to the pandemic. Depression, stress, a lack of exercise, and weight gain were a result of their quarantine experience. In the impact on society and politics, 26% of the respondents have expressed frustration with the way the society's and the government's priorities and morals seem to degrade through the pandemic. Issues related to the government's response to the spread of the virus and mask mandate have created mixed feelings among the Americans. Regarding work-life balance, nearly 23% of the respondents have reported a negative impact on their careers or jobs. Many experienced losses of jobs or reduction in duties - working from home was the main stressor for many essential workers, mainly in the fields of healthcare and education. In contrast, only 13% of the respondents have reported a positive change in this area. These responses highlighted the benefits of working from home including increased productivity and improved work-life balance. In the area of finances, 22% of the respondents expressed

financial hardship related to the pandemic. In another survey during the same period, 33% of the respondents revealed they used their savings to pay for their daily needs, while 25% reported difficulty in paying their bills. Most of these respondents reported job loss and increased prices. Conversely, close to 13% of the respondents have reported a positive change in income due to the pandemic (Kessel et al., 2021).

Despite the mixed feelings about change under COVID, it can't be avoided. Due to the continuous spread of the virus - which caused a rise in hospitalization and fatalities, governments and individuals must consider personal moral when introducing and implementing changes to our way of life (Nihlén Fahlquist, 2021). Governments of the world have chosen different approaches to mitigate the rising risk of the virus. Desvars-Larrive et al. (2020) classified governments' responses to the virus into three group strategies: aggressive, herd immunity, and laissez-faire. Governments such as Taiwan and China were proactive in introducing and implementing strict rules including lockdowns and quarantines which called for limiting the civil rights of their citizens. Other governments such as Norway and Sweden have favored the herd immunity approach. These countries started by issuing voluntary strong recommendations to their citizens, then moved to a stricter approach as the pandemic became worse. Other governments such as the US and Brazil adopted the laissez-faire approach, privileging personal liberty and freedom over the common health of the public.

Understanding Resistance to Change

It is human nature to resist change that is viewed to be harmful and unnecessary. In the organizational world, employees fear and resist change because it is viewed as a threat to their jobs and organizational status. Tanner (2021) suggested several reasons that explain why employees resist change in the workplace including 1) poor alignment of reward systems: typically, managers are credited for a successful implementation of change but not employees. Introducing a fair reward system can help motivate employees and reduce resistance to change, 2) fear of the unknown: clear two-way communications would demolish rumors and allow employees time to process, accept, and prepare for the change, 3) mistrust: management must continue to earn employees' trust. Through communications and continuous support, employees' fear of the change would be reduced, and 4) internal politics: some employees may fear the loss of their status and power. They may resist change and solicit support from other peers. Managers must continue taking positive steps to implement change. Through continuous employee support and clear and timely communications, they can overcome such obstacles. A 2007 Prosci benchmarking report of best practices in "change", surveyed about 400 organizational leaders from 59 countries. The 70 pages report concluded that the primary reasons employees resist change include a lack of understanding of the purpose of change and how it impacts their daily roles, fear of the unknown, job insecurity, and a lack of support. The report also identified the reasons management resists change including loss of control and authority, a lack of time to introduce and implement the change, the comfort of the current organizational state and status, and putting self before the organization (what's in it for me?), and a lack of involvement in designing the change (Creasey, n.d.).

The Acceleration of Change during the Pandemic

The pandemic will have a long-lasting impact on the economy and society (Routley, 2020). The daily announced national and global fatality numbers are eye-openers and call for an emergent need to change the way organizations do business. To transition life back to normality, many organizations – including hospitals and healthcare systems like Merit Health Natchez (Mississippi), Sarasota Memorial Hospital (Florida), and Wickenburg Community Hospital (Arizona) required their employees to vaccinate against COVID as a condition of employment (Gooch & Mitchell, 2021). Most employees complied with the mandate, not only to conform to the organizational required change but also to correspond with the morals and ethical belief that the vaccine will help end the pandemic and protect self and the society at large. Other organizations were hesitant to such a mandate for fear of employee resistance and the risk of discrimination claims (Smith et al., 2021).

Change is intentional. There are many driving forces that push an organization to react and change. Consequently, decisions are made by senior leaders to transform the firm to a new desired state. Aravopoulou (2016) identified external forces that inspire organizational change including 1) political forces, such as governmental policies and changes in taxation laws, 2) economical forces, such as changes in governmental economic legislation (e.g., changes in employment and corporate tax laws), 3) social-cultural forces, such as those that impact how organizations attract and retain their talented employees, and 4) technological forces, such as the advancements made in production and IT (software and hardware). Lunenburg (2010) identified the following internal forces to include: 1) administrative processes, such as the nature and extent of the communication (downwards and upwards), 2) the effectiveness of leaders in making good decisions, 3) the firm's motivational strategy that helps staff conform to change and reduce resistance, and 4) people issues that include poor performance, absenteeism, and high turnover rates.

The sudden and fast spread of the COVID virus has challenged organizations to introduce, implement, and manage change urgently. Stanleigh (2011) recommends the rapid change process to deliver immediate positive results. First, leaders need to understand the challenges and opportunities associated with the change. Then, apply and manage the rapid change process carefully. Organization leaders must consider the impact of the change, not only on the organizational bottom line but also on their employees. Understanding these challenges and preparing to address them would ensure a successful rapid change process. Such challenges and opportunities include creating an environment that maintains employees' enthusiasm about the change, ensuring that employees adapt to change and don't go back to the pre-change way of doing business, prioritizing projects, and the available resources, understanding the science behind the change, and implement it with art, and creating and managing a cultural shift that promotes, implement, and sustain organizational change.

Resistance to Organizational Change during the Pandemic

Most organization leaders are convinced that the current business status is unacceptable, and organizational

change is crucial for survival (Stanleigh, 2011). Conversely, employees fear change and tend to resist it. Uncertainty, mistrust in leadership, employees' selfishness, and a lack of communication are some of the common reasons for employee resistance to organizational change. Uncertainty is driven by fear of the unknown. Employees are susceptible to hate the unfamiliar. This fear also brings resentment against management that appears to have no consideration for how employees feel about the change, which leads to mistrust in management. The fear of change also brings the worst in people. Employees may resist because they could lose a title or status because of the change. Self-centered employees lose control in a new environment and may engage in political behavior to develop a sense of power. Leaders need to anticipate resistance to change. Clear and effective communications and proper training are important to help employees understand, accept, and praise change. Employees must understand the organizational goals and expectations to transform the entity to an improved status (Tamunomiebi and Akpan, 2021).

Resistance to change because of COVID is low and may be hidden. Now more than ever, the survival of firms – especially smaller firms depend on how quickly and efficiently change is introduced and implemented. A 2020 IMF (the International Monetary Fund) working paper reported that medium-size businesses' failure rate has increased close to 9%. Such a rate is disastrous as many businesses were forced to shut down or face declined revenues. Businesses that survived responded early to the pandemic by introducing and implementing changes in operations and products. Their employees accepted and praised change – to save the business and their jobs. Firms that continue adopting such a positive mindset – even after the pandemic will look for and face challenges early and continue improvements. Creating plans to respond to crises and improved decision-making are proven to create corporate resilience and competitive advantage (Bradley et al., 2020).

Although resistance to organizational change because of the virus is low, resistance to change for other reasons unrelated to COVID was higher during the pandemic. A 2020 Cleveland Clinic and Parade Magazine Survey found that the pandemic triggered a wave of mental issues among Americans. The most common issues are stress (33%), anxiety (30%), depression (24%), and loneliness (24%). In general, 78% indicated that the isolation and social distance during the pandemic have made them value their relationships, 72% expressed they hope for a better future, and 58% stated they reevaluated their life goals (Cleveland Clinic, 2021). Leaders must consider these possible symptoms that may trigger resistance and resentment to change among their employees. Furthermore, they must provide additional support to those employees who work remotely since they are more likely to exhibit these mental health challenges.

Techniques for Reducing Resistance to Change

Kotter and Schlesinger (1979) suggested different methods to help managers influence individual employees and groups during change. They explained that: 1) education and communication would help them persuade their employees to accept change, 2) participation and involvement would encourage employees to commit to the plan, 3) facilitation and support would help adjust employee status, 4) negotiation and agreement would help

individual employees and groups who would lose power to come to an agreement with management and accept change, 5) manipulation and co-optation would be used when other tactics fail or are expensive, and 6) the explicit and implicit coercion method could be used in times of urgent need to change and the initiator of change holds significant power. Choflet et al. (2021) proposed techniques to be used by change leaders under COVID to include: 1) clear, timely, and persuasive communications to the team about the urgent need for the change, 2) sharing with employees information about the plan, and vision for the change, 3) management commitment and continuous support to employees and educating and training all those impacted by the change, and 4) negotiating and collaborating with individuals and groups who would lose power or would have a status or role change. These tactics can also improve management competencies, the scope of change, the change plan, and employees' confidence.

Conclusion

Organizational change is a reality and expected. Leaders must anticipate resistance to change and take the necessary steps to help employees transition and adapt. Early introduction to change, soliciting employees' feedback, as well as addressing their questions and concerns can help reduce their resentment to change, mistrust of management, and job insecurity. Conversely, employees must believe in their leaders and share their vision for change.

Whether under normal conditions or distress – such as under COVID, employee resistance to change is reduced or eliminated when the purpose of the change is communicated clearly, when the employees' view of the big picture is aligned with their executive leaders' and senior managers', and when the employees have the best interest of the organization at heart and recognize that the survival of the organization depends on making positive changes. Employees then would view change as a necessity, and it would align well with the organizational goals and values.

Selecting the appropriate technique can help leaders face and overcome employees' resistance to change. Involving all who would be impacted by the change to participate in the planning and designing of the change, allowing ample time to help employees process the idea of change, and providing clear communications, training, as well as continuous support are great techniques that can reduce employee resistance to change.

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A World Pandemic and a Clarion Call: The New Push for DEI Initiatives in Higher Education

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Abstract: Diversity, equity, and inclusion (DEI) is a term used to describe policies and programs that promote the representation and participation of different groups of individuals, including people of different ages, races and ethnicities, abilities and disabilities, genders, religions, cultures, and sexual orientations. [1] Diversity, as it relates to a group or persons, or a community of people, is identified by various characteristics. This includes distinctions of social orientation and class, and cultural identity. When equity is present within a group, the result is equal access enjoyed by everyone; this includes equal opportunities as well as the potential for advancements. The American Council on Education (ACE) argues that the objectives of DEI initiatives have been voiced actively for years, targeting inequities in education. However, the global crisis of the COVID-19 pandemic, the systemic racism in America, and the race-based inequities in higher education—have converged to create a critical mass and sharpen the demand for more effective approaches to address the DEI needs at the university and college levels. This paper will offer a research-based examination of these principles, and how they can and are being applied in university classrooms to ensure equity standards in learning opportunities.

Keywords: DEI, Diversity, Inclusion, Multi-cultural, Cultural

Introduction

The objective of equity is to annihilate obstacles that have been barriers to some, prohibiting them from full participation and access. For those who work in education and leaders who seek to promote the educational well-being for all, this is a particular concern. We seek to advance diversity initiatives, with the belief that a diverse community in the classroom and university environment can enhance the learning experience. George Floyd's gruesome and tragic murder, seen by a quarantined world amidst a pandemic, focused attention on the inequities that have historically plagued American society. Without question, the complexity of these inequities is far reaching across social, ethnic, cultural, and economic lines; related, inequities in education are also pervasive, and demand a response from university and college leaders. Many in educational leadership see this as an opportunity to create impactful and lasting improvements that will benefit the lives of the underprivileged and people of color.

By advancing the importance of diversity in the classroom, assuming a leadership approach that is equity-centered, and working toward greater inclusion, educational leaders can ensure that our colleges and universities deliver on America's promise of higher education for every student who aspires to this achievement.

As faculty at Columbia College Chicago, my colleagues and I were forced to reconsider our approach to teaching in light of COVID-19 and the subsequent quarantine. Within a scant two weeks, we shifted from in-person to online classes. The transition presented many challenges as we worked to deliver substantive classroom experiences from the safe confines of our individual homes. We understood the critical nature of this period in educating our students, and the importance of realizing the college's missions. The transition to remote learning in the spring 2020 semester quickly exposed the inequities among our student body. Many were ill-prepared to engage in online course offerings, with inefficient technical facilities, or no consistent access to computers.

Amidst faculty meetings wherein issues of inequity and COVID-19 dominated the agenda, our attention was galvanized by the news of George Floyd, an African American man who was murdered by a police officer in Minneapolis. Almost immediately, conversations regarding inequities in education rippled outward to include an examination of inequities across every stratum of human existence for people of color living in White America. And the conversation grew to gain intense global interest. The crisis facing our nation sharpened our focus, as an institution, to view our work with an energized purpose, greater creativity and problem-solving, and with a sense of urgency. Columbia's response to the social crisis of inequity is not unique, fortunately. The healthcare disparities for the poor, largely people of color, raised interest in national statistics related to education for this segment of the American population.

There has been a call for increased attention to racial segregation in U.S. schools, linked to communities and its resources. Some of the most vocal have been parents, educators, and employers who are reassessing their priorities in consideration of our increasingly global economy and the U.S. demographic changes and migration patterns. [1] According to Higher Education Today.org, for the first time, the K–12 student population in the United States has shrunken in numbers, representing less than 50 percent white, non-Hispanic. Comparatively, in geographic areas that are largely metropolitan, large-scale migration patterns can be observed, as more black, Hispanic, and Asian families secure dwellings in the suburbs and more whites return to "gentrifying" urban neighborhoods. The result is a diversification of communities being formed, if only for a short period, before familiar patterns of racial segregation re-constitutes. [2] These recent developments signal a critical moment in history. We, as a nation, are at an intersection that presents the following: the potential of more racial unrest along with the potential of racial healing. This can be accomplished because of our society's social, racial, and economic divisions decreasing, and increased equality and greater accessibility to resources granted to everyone.

Columbia's response to the DEI initiative is a multicultural educational experience for students; moreover, for instructors, this means being culturally responsive as an educator, with the understanding that this approach will

benefit every student. Drexel University School of Education espouses similar philosophies, promoting on their website that "creating greater multicultural awareness and inclusion help students with different backgrounds and needs succeed, but it encourages acceptance and helps prepare students to thrive in an exponentially diverse world." [3]

The Benefits of DEI

Increased Intercultural and Cross-Racial Knowledge, Understanding, and Empathy

One of the leading proponents of DEI has been the Century Foundation. According to their website, the institution is a progressive, nonpartisan think tank that seeks to foster opportunity and reduce inequality. They assert that there is "robust social science evidence on the positive relationship between student body diversity and academic outcomes." [4] They go on to argue "there is a similarly impressive body of research supporting the correlation between campus and classroom diversity and an enhanced ability of students to exhibit interracial understanding, empathy, and an ability to live with and learn from people of diverse backgrounds." [4] The institution sites the amicus brief filed by Brown and other elite universities in the Fisher II case that asserts "diversity encourages students to question their assumptions, to understand that wisdom may be found in unexpected voices, and to gain an appreciation of the complexity of today's world." [4] Other research they reference includes analyses of "how racially diverse educational settings are effective in reducing prejudice, by promoting greater contact between students of different races—both informally and in classroom settings—and by encouraging relationships and friendships across group lines." [4]

Better Preparation for Employment in the Global Economy

Nearly half of the Fortune 100 companies, among them Apple, Johnson & Johnson, and Starbucks, presented a brief (APA) that argued the essentials to success in a global economic market: it requires hiring highly trained employees of all races, religions, cultures, and economic backgrounds. They further mentioned that "all of their university-trained employees enter the workforce with experience in sharing ideas, experiences, viewpoints, and approaches with diverse groups of people." [5]

Business leaders posset that the aforementioned cross-cultural skills are a "business and economic imperative," given the growing diversification of the national and global economies. Understanding these critical components to business success, companies assert that college graduates should be equipped with creative problem-solving approaches to integrate a variety of perspectives that take them beyond just linear, conventional thinking. Students who have benefitted from DEI environments often have skills sets that increase their ability to work productively with diverse business partners, employees, and clients in the U.S. and global marketplace; and they are "likely to generate a more positive work environment by decreasing incidents of discrimination and stereotyping." [5]

Strong leadership skills are also enhanced by diverse educational environments. Students develop better people-skills, preparing them to work in environments where there is a diversification in race, ethnicities, and culture. A longitudinal study found that "the more often first-year college students are exposed to diverse educational settings, the greater their gains in leadership skills, psychological well-being, intellectual engagement, and intercultural effectiveness." [5] Moreover, the APA brief argues, in addition to apparent academic pursuits, colleges and universities also equip students to be "effective economic and political leaders on local, national, and global levels. Effective leadership begins with prejudice reduction." [5]

Developing Civic-mindedness and Consciousness

And finally, the brief asserts that "students' experiences in diverse classrooms can provide the kind of cross-cultural dialogue that prepares them for citizenship in a multifaceted society." [6] Students develop civic-mindedness as it relates to democratic participation; and they are more inclined to civic engagement, such as becoming involved in community activities, as a result of their diverse learning experiences. The report sites "one meta-analysis synthesized twenty-seven studies on the effects of diversity on civic engagement and concluded that college diversity experiences are, in fact, positively related to increased civic engagement." [6]

Effective Approaches to DEI in the classroom

There are a myriad of ways educators and administrators can work to ensure that both the classroom environment and curriculum are diversity-centered and sensitive to the cultural representation of American society. The following strategies are offered by Drexel University School of Education and can be a template to encourage cultural awareness in our learning environments, respecting the personal voice of each student while enhancing their sense of identity, and building classroom community through fostering inclusivity. These strategies have been implemented at Columbia College Chicago, and other institutions of higher education, where DEI has been made a central component of the curriculum.

Get to Know Your Students

As the instructor, your leadership becomes the model by which others will likely pattern their behavior in the classroom. Professors should prioritize understanding each individual student; this is the beginning steps to promoting cultural awareness in the classroom. Devote some time to learning something about individual student's cultural background, their hobbies, their learning styles, and certainly, anything that makes them unique. The dividends the professor—and all students—will reap is the establishment of trust; this is the beginning to forming a bond, as each individual student feels equally valued. If students feel respected and appreciated by their professor, there's an increased likelihood the student will feel comfortable communicating with—and respecting—their peers in the class. Effective communication is the critical ingredient to cultural sensitivity and awareness, and a sense of inclusion in the classroom community.

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Maintain Consistent Communication

Good communication should continue to be a priority. Professors should make a consistent effort to maintain communication with their students for the duration of the semester and academic year. Scheduling one-to-one conferences is a standard practice for students in each course offered at Columbia College Chicago. This is an excellent opportunity to ensure the instructor's accessibility while engaging in individual communication with each student. That said, mini-conferences or drop-ins can also be managed, and don't have to be limited to faculty office hours. While each of us may still be recovering from the infamous Zoom-fatigue, video chats remain a good option to extend meeting invitations to your students. Student conferences don't have to be strictly about course work and student performance; additionally, meetings can be an opportunity to discuss whether the student feels included in the classroom culture. This thread of conversation can help identify difficulties, issues, or inspire ideas to improve the overall course experience.

Respect Each Student and Acknowledge Who They Are

An important aspect of DEI centered work in colleges and universities is motivating individual student's appreciation for their own cultural histories. Students should be encouraged to celebrate and respect their diversity, and the diversity of other's. This can be accomplished through course work, when appropriate. For example, research assignments are given in Columbia's literature seminar classes where students investigate their own ethnic and cultural backgrounds. This provides an opportunity for each student's personal cultural enrichment and permits them to showcase their work in the classroom community. The research can be used for students to speak about their family traditions, cultural practices, and the like. This is an excellent way for students to become more deeply acquainted and to nurture the sense of community in the classroom. We have observed that students feel recognized, as they gain a better or deeper understanding of their own culture; moreover, the exercise serves to enhance their appreciation and respect for their peers' uniqueness. Acknowledging these differences and creating a safe community space for discussion encourages respect and civility that can extend beyond the classroom. Also, as students learn about diverse backgrounds it presents an opportunity to highlight what's offensive and the distinction between cultural celebration and appropriation. Learning how to respectfully communicate with and about people from other cultures is essential for success beyond the university experience.

Act with Cultural Sensitivity

Certainly, it is important to encourage open dialogue and the exchange of ideas amongst students; however, it's equally as important to make certain that we, as instructors, are being sensitive to the everyone's culture, beliefs, and language concerns. It's important that we educate ourselves on each student's cultural nuances, that includes learning styles to language dynamics. This can provide helpful insights that can be used to inform lesson plans.

Consider creating assignments that require more student interaction and collaboration, rather than the tradition lecture-based style of teaching. These varied approaches to teaching will help encourage student engagement and increase the students' sense of inclusion. Student success increases when they are given the opportunity and space to learn in their own way.

Incorporate Diversity in the Lesson Plan

Cultural awareness can be promoted in the classroom environment, but it's also important that diversity representation, reflective of the cultural composition of the students in the classroom, are also included in the actual lesson plan. From my own experience teaching literature seminars, books are selected that reflect student ethnicities in the classroom. Students appreciate reading works by authors and stories that are relatable to their cultural point of view. The impact on student engagement is always noteworthy, in this context. Students are more apt to pay attention, and to share their thoughts and observations on what's read. There is an inherent permission student feel when writers who look like them are read, and stories that reflect their personal human experience are given attention in the broadest, most respectful way in discourse.

Other approaches may include, for example, widening a study of history that includes a world view beyond western culture; or perhaps integrating analogies in lectures that include references to other cultures. For those students who are from diverse cultures, this approach may help them personally connect. Another consideration is to invite guest speakers from diverse backgrounds to the class to share various points of view, and to give life-experience texture to the subjects being taught. Regardless of the subject, it is important to have lessons that reflect real-world issues, and when possible and appropriate, lessons that are relatable to the cultural population of students in the classroom. Without question, achieving DEI objectives and promoting cultural awareness within course assignments are more easily achieved when there's a real example for students to relate to.

Permit Students to Exercise Freedom and Flexibility

As we discussed and planned to re-design some of the existing courses at Columbia to be more DEI centered, one strong consideration has been to vary the management approach of the classroom. Students learn differently and sometimes possess contrasting skill sets or strengths, as compared to others in the classroom. This requires that professors give thought to the valuable lessons that can be learned through the student's own experience. Simply put, giving students some creative freedom in the course can encourage a stronger connection with the course agenda. Consider permitting students to read and respond to their own chosen material (approved by the professor) that relates to the lesson objectives, thereby giving students the opportunity to explore options that appeal to their individual curiosities.

The instructor can assume the role of facilitator and encourage healthy discourse involving various opinions. Group assignments are also another option to invite a range of student perspectives, allowing them to work

together to explore and exchange ideas on a select topic. The benefit to this activity is that it serves as preparation for the students' role in a diverse workforce, wherein they'll have to partner and collaborate with a range of people to accomplish tasks.

Outcomes of DEI in the College and University Classrooms

Culturally based teaching strategies are crucial to the enhanced learning experience for all students, regardless of their ethnicities, with immediate benefits that can have long-term impact.

Students Learn Empathy

Encouraging awareness and respect for diverse points of view, as well as promoting a personal connection with various cultures in the classroom can inhibit impulses of prejudices later in life. They learn to empathize with people different from themselves, having been encouraged to engage others who may have life experiences that are unlike their own.

Students Gain a Better Understanding of People and Lessons

As a result of a classroom environment where working and learning with people from various backgrounds and cultures were encouraged, students are afforded an enhanced understanding of the subject matter. Additionally, students learn how to utilize their own developing skill sets, strengths, and points of view to add contributive value in a diverse working environment.

Students Become More Open-minded

Open-mindedness is an important benefit student gain from having been exposed to a variety of opinions, unique from their own, other people's thoughts, and various cultural backgrounds. Students grow to become more receptive to new ideas and be able to attain a broader comprehension on a topic by considering different points of view.

Student Confidence Increases

Students who learn about and are exposed to different cultures during their academic training gain a comfort level and feel safe with these differences later in life. This permits them to comfortably engage and interact in a broader social spectrum with self-confidence as they interact with others.

Students Develop Skill Sets That Better Prepare Them for Diversity in the Workplace

With the increase of globalization, the importance of being able to work successfully with people of diverse cultures and backgrounds is also on the rise. Students who are exposed to diversity in academic settings and learn cultural awareness in the classroom are better equipped for success in the workforce.

Conclusion

DEI centered teaching fosters inclusion, awareness, and human respect. Taking a culturally responsive approach to teaching benefits all students. Multicultural awareness in the classroom bolsters the success of students with different backgrounds and needs, but it also encourages acceptance and contributes to all student preparedness to succeed in an exponentially diverse world. Diversity in and out of the university classroom will continue to expand; therefore, it's expedient that we, as educators and leaders, prepare students for the evolving world and teach them to respect those who are different from themselves.

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Investigation of Individual Competitiveness: Perceptions of Students Taking Special Ability Exams

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Abstract: Competition refers to a phenomenon that can affect and direct observable human behaviour. Competitiveness can be a triggering factor in achieving success and focusing on the target. The individual competitiveness scale can provide an opportunity to observe and evaluate students participating in various competitions within the scope of exams. This study seeks to examine the individual competitiveness perceptions of the students who take special talent exams according to some demographic variables. This quantitative study was carried out in a descriptive survey model. The sample of the study consists of 218 students who participated in the special talent exams held in September 2021 at Kahramanmaras Sutçu Imam University Faculty of Sports Sciences. Data were analysed using the statistical software program Jamovi 1.6.12. Arithmetic mean and standard deviation values were determined for data analysis while t-Test and One-Way Analysis of Variance (ANOVA) were used to determine the differentiation status of participant views in terms of demographic variables, and Post-Hoc tests were used to determine the groups with difference for the significant F value. As a result of the research, it was observed that there were significant relationships between the participants' Individual Competitiveness Scale and the CPT (Core Proficiency Test/Exam) score, age, sports branch and weekly work-out variables according to the "Enjoyment of Competition" sub-scale. According to the ' Competition Avoidance' sub-scale, there were significant relationships in terms of the CPT score, age, and weekly work-out number variables and that there was no significant relationship in terms of sports branch variable. As a result, students' individual competitiveness perceptions were determined in terms of different variables.

Keywords: Individual Competitiveness, Special Talent, Exam, Student

Introduction

The competition term remains as an important notion in today's world. Competition can be considered as a phenomenon that can affect the concrete behaviors of people and direct their behaviors. Though concepts such as (to) compete, competition, competitor, and competitiveness seem to be used generally more in industry, marketing, and trade, it is a common notion used in all areas. This notion is also used constantly in the field of sports. In sports, there is usually an opponent to compete with, and it is done with the aim of winning and

succeeding. In individual competitiveness, the competitive drive of the individual plays an essential role in attaining the goal.

In competitiveness, being ahead of competitors, along with the ability to survive, can be regarded a success. Some individuals do not enjoy competition and thus avoid it. Some individuals enjoy competition with rivals and try to be superior to others. According to Bilbey/Akbayırlı (1998), competitiveness is the effort to perform at a higher level than what one does in activities related to oneself and/or the desire and effort to perform at a higher level than others in comparison to others.

There are two main sources of motivation that affect and sustain the notion of competition, which is used in social, economic, educational and sports issues. The first one is the desire to be better and perform better than other people. The second is the desire to compete with oneself and to improve one's own performance and self-development (Hibbard & Buhrmester, 2010; Houston et al. 2002; Menesini, Tassive & Nocentini 2018). Rivalry in sport has been defined as, "a fluctuating adversarial relationship existing between two teams, players or groups of fans, gaining significance through on-field competition, on-field or off-field incidences, proximity, demographic makeup and/or historical occurrence(s)" (Havard et al., 2013).

Today, it is inevitable for individuals to think innovatively in society thanks to the rapid development of technology with knowledge in a rapidly changing and developing world. Sports is one of the areas that aims to systematically educate individuals in line with research activities designed for the development of innovative educational technology including safe and effective applications in the field of protection of the health of individuals, multifaceted development, and personal development (Atılgan & Tükel, 2021). In this context, it becomes important to follow and adapt to innovations to compete in sports.

Individual competitiveness may vary from person to person. Some people seem to turn almost every situation into a competition and others tend to be indifferent toward competition, or even some others avoid it whenever possible (Mudrack, Bloodgood & Turnley 2012). Atılgan & Tükel (2021) suggest that to ensure a good competition, there is a need more than ever for productive employees who are energetic, enthusiastic, and focused, devoted to the clubs, teams, institutions and organizations they work for as well as have a sense of responsibility and care their job in all sports activities, organizations, and events. Competition helps the individual do the best s/he can while also motivating to succeed (Ediger, 2000). Individual competitiveness can be a trigger factor in achieving success and focusing on the goal. The individual competitiveness scale can offer the opportunity to observe and evaluate students participating in various competitions within the scope of exams. In this context, this study aims to reveal the perceptions of individual competitiveness of students taking special talent exams according to some demographic variables. The research questions were as follows:

- Do individual competitiveness perceptions of the students differ according to CPT (Core Proficiency Test)?
- Do individual competitiveness perceptions of the students differ according to the age variable?
- Do individual competitiveness perceptions of the students differ according to the sports branch

variable?

• Do individual competitiveness perceptions of the students differ according to the number of work-out per week variable?

Method

Research Model

The research is a quantitative study carried out in the descriptive survey model. This study sought to determine the individual competitiveness perceptions of the students taking special talent exams according to some demographic variables along with examination into the differentiation status. Within the framework of ethical standards, approval was obtained from all participants with the "Informed Consent Form" in this study. The data were collected with the approval of and in the presence of the relevant institution authorities. As the researcher was assigned to take part in the exam, it was easier to collect data.

Population and Sample

The population of the study consists of students who participated in the special talent exam held in September 2021 at the Faculty of Sports Sciences, Kahramanmaras Sütçü Imam University. 576 students applied to take the exam, but 390 students took the special talent exam. Among the 390 students who participated in the special talent exam, 218 forms that were available among those who filled out the scale forms were evaluated for analysis. The sample of the study consisted of 218 students who participated in special talent exams.

Results

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

Table 1. Participant Information Included in the Research Sample

Demographic Variables		N	%
CPT (Core Proficiency Test) Score	220 and under	89	40.8
	221 and over	129	59.2
Age	18-19	119	54.6
	20 and over	99	45.4
Sports Branch	Yes-Available	153	70.2
	No-N/A	65	29.8
Number of Weekly Work-out	1-2 days	30	13.8
	3-4 days	76	34.9
	5-6 days	112	51.4

Data Collection Tools

Individual Competitiveness Scale: In this study, the Individual Competitiveness Scale was used to examine the students' perceptions of individual competitiveness. The scale developed by Houston &et al. (2002) was adapted into Turkish by Günay & Celik (2020). The scale is two-dimensional including enjoyment of competition and competition avoidance (Cronbach Alpha: .94 and .81). The scale is in form of 5-likert and graded as 1=strongly agree, 5=strongly disagree. The total Cronbach alpha coefficient of the Individual Competition Index is .81 and has a high level of reliability. In this study, the overall Cronbach Alpha coefficient was .82, while it was .74 for the Enjoyment of Competition sub-scale and .77 for the Competition Avoidance sub-scale.

Data Analysis

Scale forms were submitted to participants in a face-to-face environment and they were asked to fill out the forms. 218 participants gave usable feedback. The data of the study were analysed using the statistical software program Jamovi 1.6.12. Arithmetic mean and standard deviation values were determined for data analysis. As a result of the normality test, the skewness value of the data was determined as .372 for the Individual Competitiveness Scale, .694 for the Enjoyment of Competition sub-scale, and -.219 for the Competition Avoidance sub-scale. Since the distribution was normal, t-test and One-Way Variance Analysis (ANOVA) were used to determine the differentiation between the variables, and Post-Hoc tests were used to determine the groups that differed for the F value found to be significant.

Findings

In this part of the research, the data were evaluated statistically and the result of evaluation is shown in tables. Findings regarding the arithmetic average and standard deviation values of the scores of the students' obtained from the scale of individual competitiveness are shown in Table 2.

Table 2. Arithmetic Mean and Standard Deviation Values of Participants for the Individual Competitiveness Scale and its Sub-scales

Scale and Sub-scales	N	Min-Max	$\overline{\mathrm{X}}$	SD
Individual Competitiveness	218	1-5	2.83	.53
Enjoyment of Competition	218	1-5	2.80	.92
Competition Avoidance	218	1-5	3.11	1.19

Table 2 highlights that the participants' overall score average for the individual competitiveness scale and their opinions on enjoyment of competition and competition avoidance were moderate.

The findings regarding the distribution of students' CPT (Core Proficiency Test) variable scores are shown in Table 3.

Table 3. Differentiation Status of Participants' Perceptions of Individual Competitiveness According to CPT (Core Proficiency Test) Score and *t*-test Findings for Independent Samples

Scale and Sub-scales	CPT-Core Proficiency Test	$\overline{\mathbf{X}}$	SD	t	p
Individual Competitiveness (Score)	220 and under	2.77	.54	-2.68	.008*
	221 and over	2.97	.52		
Enjoyment of Competition	220 and under	2.55	.81	-3.51	.001*
	221 and over	2.98	.94		
Competition Avoidance	220 and under	3.37	1.19	2.70	.007*
	221 and over	2.93	1.17		

*($p<0,05$)

Table 3 highlights that statistically significant differences were found in the enjoyment of competition and competition avoidance in terms of the CPT (Core Proficiency Test/Exam) variable ($p<0.05$). Participants with a score of CPT (221 and over) were found to have a higher score than participants with a low score of CPT (220 and under) in the overall competitiveness scale. And finally, it is the opposite for competition avoidance.

The *t*-test results of the distribution of students' according to the age variable are shown in Table 4.

Table 4. Differentiation Status of Participants' Perceptions of Individual Competitiveness According to Age and *t*-test Findings for Independent Samples

Scale and Sub-scales	Age	$\overline{\mathbf{X}}$	SD	t	p
Individual Competitiveness	18-19	2.81	.50	-2.51	.013*
	20 and over	2.99	.56		
Enjoyment of Competition	18-19	2.63	.76	-3.17	.002*
	20 and over	3.02	1.04		
Competition Avoidance	18-19	3.28	1.12	2.30	.022*
	20 and over	2.91	1.25		

*($p<0,05$)

Table 4 highlights that statistically significant differences were found in the overall individual competitiveness scale, and enjoyment of competition and competition avoidance sub-scales ($p<0.05$). Participants aged 20 and over were found to have higher scores than participants aged 18-19 in terms of enjoyment of competition in the overall individual competitiveness scale. Participants aged 20 and over had lower scores than participants aged 18-19 in terms of competition avoidance.

The *t*-test results of the individual competitiveness scale scores according to the sports branch variable of the students' are shown in Table 5.

Table 5. Differentiation Status of Participants' Perceptions of Individual Competitiveness According to Sports Branch and t-test Findings for Independent Samples

Scale and Subscales	Sports Branch	$\overline{X}$	SD	t	p
Individual Competitiveness	Yes - Available	2.94	.56	1.98	.048*
	No-N/A	2.78	.46		
Enjoyment of Competition	Yes-Available	2.90	.99	2.44	.015*
	No-N/A	2.58	.67		
Competition Avoidance	Yes - Available	3.02	1.22	-1.71	.088
	No-N/A	3.32	1.10		

*(*p*<0,05)

Table 5 highlights that statistically significant differences were found in the overall individual competitiveness scale and enjoyment of competition (*p*<0.05). Participants with any sports branches were found to have higher scores than participants with no sports branch in terms of the overall individual competitiveness scale and enjoyment of competition. There was no statistically significant difference in terms of competition avoidance (*p*<0.05).

The one-way analysis of variance (ANOVA) results of the individual competitiveness scale scores according to the number of weekly work-out variable of the students' are shown in Table 6.

Table 6. Differentiation Status of Participants' Individual Competitiveness Perceptions According to the Number of Weekly Work-out and One-Way Variance Analysis (ANOVA) Results

Scale and Sub-scales	Weekly Work-out	N	$\overline{X}$	SD	F	p	Groups with differences (Post-Hoc Test)
Individual Competitiveness	1-2 days (a)	29	2.66	.96	6.10	.003*	b – a, c
	3-4 days (b)	75	3.11	1.14			
	5-6 days (c)	113	2.68	.63			
Enjoyment of Competition	1-2 days (a)	29	2.65	.95	5.30	.006*	b – a, c
	3-4 days (b)	75	3.08	1.15			
	5-6 days (c)	113	2.66	.65			
Competition Avoidance	1-2 days (a)	29	3.33	1.26	4.65	.010*	a, c – b
	3-4 days (b)	75	2.78	1.26			
	5-6 days (c)	113	3.28	1.09			

*(*p*<0,05)

Table 6 highlights that statistically significant differences were found in the overall individual competitiveness scale, and enjoyment of competition and competition avoidance ($p<0.05$). Participants with a weekly work-out of 3-4 days were found to have higher scores than participants with a weekly work-out of 1-2 days to 5-6 days in the overall individual competitiveness scale and enjoyment of competition. On the other hand, it was determined that the participants competition avoidance who had a weekly work-out of 3-4 days had a lower score than participants who had a weekly work-out of 1-2 days and 5-6 days.

Discussion and Conclusion

This study has been designed to examine the differentiation status of the participants in terms of some demographic variables in order to determine the individual competitiveness perceptions of the students who participated in the special talent exams. It was concluded that the participants' opinions on the overall individual competitiveness scale and enjoyment of competition and competition avoidance were at a moderate level.

Participants with a high score of CPT (221 and over) were found to have higher scores than participants with a low score of CPT (220 and under) in terms of the overall individual competitiveness scale and enjoyment of competition. It can be implied that the participants with a high score of CPT have good individual competitiveness levels, enjoy competition and do not avoid competition compared to participants with a low score of CPT. Jones (2015) defined competitiveness as a dynamic mental state that guides a player towards him/her as a psychological vision, and excellence sustained by social comparisons to be better than others. According to Jones et al. (2002), it is directly related to their mental toughness which means athletes can perform and concentrate better than opponents and be in control under pressure. Bilbey and Akbayırlı (1998) suggest that In Turkey, students start competing with each other at a younger age. Exams such as LGS (entrance exams to high schools) are an indication of this. As exam systems are applied to eliminate opponents and have a new test to start business life, the competitive environment continues constantly.

It was determined that participants aged 20 and over had higher scores than participants aged 18-19 in terms of the overall individual competitiveness scale and enjoyment of competition while participants aged 20 and over had lower scores than participants aged 18-19. It can be implied that participants aged 20 and over have good individual competitiveness and enjoyment of competition levels compared to participants aged 18-19 and they do not avoid competition. The literature review reveals that some studies support these findings. It is understood from Jones et al. (2002) and Jones (2015) that the concept of mental toughness is a concept that is closely related to the concept of individual competitiveness. Crust et al., (2014), Demir &Çelebi (2019) and Yilmaz & Yilmaz, (2017) suggest that as the age of athletes increases, their confidence, continuity, and mental toughness increases. Marchant et al. (2009) and Nicholls et al. (2009) also state that mental toughness has a positive relationship with age.

It was determined that the participants with any sports branch had a higher score than the participants with no

any sports branch in terms of the overall individual competitiveness scale and enjoyment of competition. It can be implied that the participants with a sports branch have better levels of individual competitiveness and enjoy competition compared to participants with no sports branch. This indicates that the individual competitiveness aspect of the participants who have a sports branch is strong. Toprak (2019) found that the competitiveness level score average of licensed athletes was higher than that of unlicensed athletes.

It was determined that the participants who had a weekly work-out of 3-4 days had a higher score than participants who had a weekly work-out of 1-2 days and 5-6 days in terms of the overall individual competitiveness scale and enjoyment of competition. On the other hand, it was determined that the participants who had a weekly work-out of 3-4 days had a lower score than participants who had a weekly work-out of 1-2 days and 5-6 days. It can be implied that the participants with a weekly work-out of 3-4 days have good individual competitiveness levels, enjoy competition and do not avoid competition compared to participants with a weekly work-out of 1-2 days and 5-6 days. This finding is an interesting and important conclusion. It emphasizes that when planning work-out programs, it is beneficial for coaches and physical education and sports teachers to consider this result in individual competitiveness and performance improvement.

Instead of training less or training a lot in a week, training for 3-4 days a week increases the individual competitiveness the students and their enjoyment of competition levels. Training less can lead to low motivation and carefreeness, and too much training can cause extreme anxiety. And this may result in poor performance. According to Robson Bonnie (2004), some believe that competitiveness is innate behaviour and that competition is a motivation for high success. Others believe that competition is de-performing, especially for ego-oriented individuals (focusing on comparing others), as increased stress and anxiety lead to a decrease in focus and perhaps a decrease in self-esteem. In addition, Yazici (2021) concluded in his study that as the training year increases, the level of justice decreases, while the level of competitive aggression increases.

This study focused on the question whether there was a significant differentiation in some demographic variables that the students who participated in special talent exams had in terms of their perceptions of individual competitiveness, and enjoyment of competition and competition avoidance. It may be possible to achieve new results by applying the individual competitiveness scale used in this study to different samples or using it together with different scales.

Acknowledgments

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Deciding the Right Age to Vote

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Abstract: Worldwide there are many debates on making decisions about the right age of voting, it should be 16 years old or 18 years old. Mainly, the debate is elaborated into the consequences of lowering the voting process, as some countries had implemented it (mainly in Europe and South America). The right to vote is one of the fundamental human rights, recognized since 1948 by the Universal Declaration of Human Rights. This article is focused on the age of voting, but there is an age for people to get actively in voting process, the age of 18 is the right age to vote or to be voted and elected. Some empirical research has been done on this paper to present some perceptions of the experiences of 16 years old people and any possible impact of this matter on civil discourse. There are many arguments and counter-arguments to this approach, which lead to common models, as well as significant differences. For the reason of increasing the civic participation of young people, especially teenagers, lowering the voting age can increase youth representation in politics, giving in overall a positive impact in these terms. The article makes an attempt to understand differences and to decide what the best for the society itself, is especially by reflecting on its consequences, based on the Albanian case.

Keywords: Right to vote, Teenager, Civic participation, Civil society

Introduction

Since last decades, many countries had been discussed about the age of voting, as a necessity to lowering it for many benefits. The debate has been indicated by the literature review (Russell, 2014), or (Chan and Clayton, 2006,) from an advocacy perspective for lowering the voting age. Other authors have been pointed out significant problems of the lower voters, as less political engagement has been made, or many negative effects might arise (Johnson and Marshall, 2004).

The voting process is the most significant way of people to influence on government decision-making. But voting process is also a moral and a civic duty for everyone, for most of it, voting is a task for strengthening democracy. Voting is known as a formal expression of preference for a candidate/person for office or for a proposed resolution of an issue. So, the process of voting generally takes place in the context of a large-scale national or regional election. Both, regional or national elections might be just as critical to individual participation in government. The right to take part in the government of his/her country, directly or through freely chosen representatives, is a human right, but there is an age for people to get actively in voting process, the age of 18 is the right age to vote

or to be voted and elected. The Universal Declaration of Human Rights adopted unanimously by the United Nations General Assembly in 1948, recognizes the integral role that transparent and open elections play in ensuring the fundamental right to participatory government.

The Universal Declaration of Human Rights in Article 21 states:

*"Everyone has the right to take part in the government of his/her country, directly or through freely chosen representatives." (*http://www.claiminghumanrights.org/udhr_article_26.html*)*

The right to vote at the age of 16 exists in many other countries of the world, such as Austria, Bosnia and Hercegovina, Estonia, Brazil, Malta, etc. At European level, for many years, many youth movements are advocating for the voting age to be set for 16 years old.

Table 1. Countries with the Minimum Voting Age

Country	Mınimum age of voting	Type of Election	Year
Argentina	16	All types	2012
Austria	16	All types	2010
Bosnia and Herzgovina	16	All types	2010
Brazil	16	All types	1988
Cuba	16	All types	1976
Ecuador	16	All types	2008
Estonia	16	Local	2015
Greece	17	All types	2016
Indonesia	17	All types	2015
Israel	17	Local	1995
Malta	16	All types	2018
New Zeland	16	All types	2007
Nicaragua	16	All types	1984
Norwey	16	Local	2011
Sweden	16	Local	2016
United Kingdom(Scotland)	16	Local	2014

From Table 1 we have gathered the voting age through some countries in the world, in an empirical way, and what seems as a definition that still remain critical the voting age as an influence for increasing political and civic attitudes, and moreover, its impact in the society.

In Albania, about 25 % of the population is consisted by youth, in terms of 15-29 years old. Referring to national data (Instat, 2021) the population under the age of 30 represents almost 40 % of the population. This division of the population bring into to point the significant role of youth in different areas of the country. Even that almost

quart part of the population represented by youth, its manner of participation in the economic, social and political areas remain lows in Albania.

This important topic has been in the focus of debates, whether 16-year-olds should be allowed to vote or not. In 2018, an Albanian advocacy organization named CRCA-Albania for the rights of children and youth in the country, opened the national campaign "VOTO 16!". Through an open Public Petition, CRCA was asking the Parliament and all parliamentary political parties to work together to lower the age for voting from 18 that is currently to 16 years old. So, this became an open debate for those people against the year of 18 as the eve age for voting in Albania.

Method

The article brings into discussion the positive effects of lowering the voting age in the Albanian society, by making a comparison with the experience of other countries that have lowered the voting age. The methodology is based on the desk and empirical research conducted the last elections in April 2021 in Albania. The desk research includes analyzing laws, strategies and reports which are related to young people and their contribution in several levels in the society. Data and statistics is taken from the Albanian Institute of Statistics (Instat), or from other public institutions and organizations in Albania. The empirical research was done through interviews in different stakeholders, by preparing 200 questionnaires, in two main district in Albania: Tirana and Elbasan. The age of the responders was from 18 – 29 years, from which 53 % were woman.

Results

Some countries have lowered the voting age from 18 to 16, with aiming to study the effects in terms of political behavior, attitudes and engagement in the society. In none of the countries where the voting age has been reduces to 16 or 17 years old, from all literature and data that we have seen, we cannot find some or many negative effects of the lowering of the voting age on young people's engagement or civic attitudes.

In comparison with these countries, especially in Albania, where political participation is below the average, the need for reducing the voting age remain a serious point of nowadays discussion. Young people in Albania make up about 1/3 of the most active population and as such have an essential role in the electoral and democratic processes of the country. The Citizens' Resistance during the campaign and elections on April 25, 2021 analyzed several components of the elections, including youth participation, youth representation on electoral lists and in parliamentary seats, where it was found that only 2 of the next 140 deputies will belong to the age of 18 - 29 years old.

Despite the low attention paid to young people, through this analysis the aims were to measure perceptions and reveal the opinions of young people on the vote, the system and political parties, after the completion and

announcement of election results by the Central Election Commission. This analysis serves decision makers and actors working in the field of youth to bring energy to the needs of this category in relation to the electoral process.

About 75.8% of the respondents had university or postgraduate education, while 20.2% of them had secondary or primary education, about 3.1 % had elementary education, and 0.4 % were with no education at all (see Figure 1).
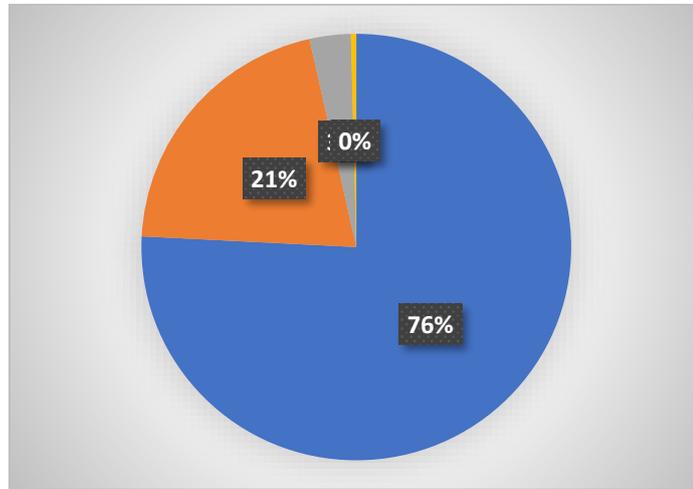

Figure 1. Level of Education of Votes

79.8% of young people surveyed did not belong to political forces, while 20.2% of them were part of political parties competing in the April 25, 2021 elections (see Figure 2).
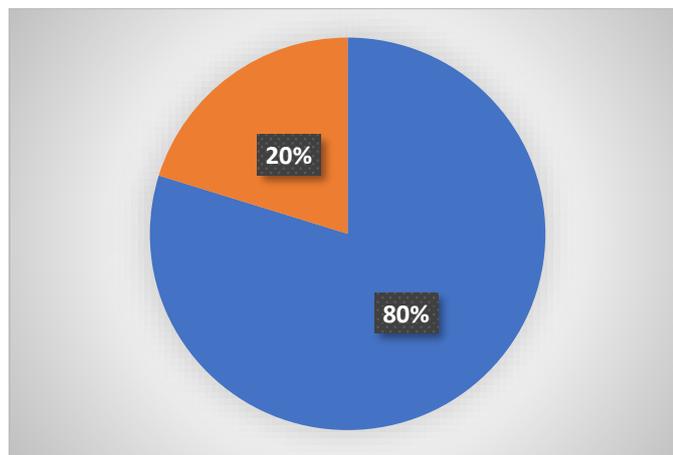

Figure 2. Level of Political Participation

Given the problems over the years, such as the skepticism of young people about the importance of voting, young people were asked about the trust and orientation of the vote. About 76.4% of young people believe that their vote would be decisive in the election result while 13.8% believe that it does not affect the result. Only 9.8% of young people had expressed that they do not know if their vote will affect the result of elections.

Discussion

Positive Effects on Lowering the Age to Vote and their Impact on the Society

Age development

The age of 16 years old is big deal to most teens, and it not only does with their freedom expand with the addition of a driver's license, but they also are becoming more cognizant of what they want to do in their future. People which are supposed to register to any school or college may be visiting universities or preparing to take the appropriate standardized tests. On the other side, the parents and caregivers of young people at 16-year-olds can bring both joy and frustration to their parents and caregivers. The Cognitive Development of a 16 years old person is no longer simply thinking about his/her own life. In the mid-teen years, kids start to consider how the entire world works and how their life fits into it. There are significant differences in the level of physical development among genders, which is more visible around the age of 16. Females, who are likely almost done growing and developing, are starting to slow down in physical development, while males are sometimes just getting started (Amy Morin: 16-Year-Old Child Development Milestones. https://www.verywellfamily.com/16-year-old-developmental-milestones-4171922).

According to social and emotional development level, a 16-year-old knows that adulthood is not far away, and young people may start to show more independence and engage in less conflict /debate with their parents. They can also start to take decisions with that independence in mind. However, their choices may not always feel like the right ones to their parents, and this is an important counter- arguments for those who are against the lowering age of voting.

Improving the Lives and the Respect for Children and Youth Rights

In the context of supporting the empowerment of children and youth participation in decision-making, one of the most frequent requests that has been expressed during the consultations was to reduce the age of voting to 16. According to the youth themselves, this would empower not only the political participation and representation of adolescents and young people, but also their decision-making in all the processes where adults decide for them (CRCA Albania: www.crca.al/en/vote-16).

Lowering the Voting Age from 18 to 16 years will Strengthen Civics Education

There is a connection between strong civics education and a lower voting age, as it can mutually reinforce each other to increase civic engagement. A lower voting age for many reasons is a potential issue of an efficient civic education, because can bring to people another way to apply their knowledge in their communities would add a crucial level of relevance to civics experience. On the other hand, it might encourage more schools to implement higher quality civics education programs given its immediate implications on students' lives.

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www.ihses.net	April 21-24, 2022 Los Angeles, USA	www.istes.org

Negative Effects of Lowing the Age to Vote

Age Limitation: The Mistakes Innocently Committed as a Teenager

Being at the age of 16 is all about curiosity of the world waiting upon them. Wisdom, selflessness and an understanding all at their fingertips. Keeping in mind that these qualities are only to be learnt through the mistakes innocently committed as a teenager. At the age of 16 years old it is a simple truth that they are too young to be indoctrinated by government policies and political issues.

For a person of age of 16 year, it is illegal to buy cigarettes and alcohol, to drive a car and to get a credit card in banks. So, if they have the possibility for the right to vote, would they not just vote for the party that offered them a lower age limit on these restrictions? It is completely normal to human beings to vote for what is going for them to benefit most.

No Legal Obligations: An Adult is Considered 18 -years old Person

At the age of 16, a person is legally allowed to join the army and get married, but only with parental consent. Teenagers' needs for freedom and independence are successfully recognized but unfortunately only applied if you're given the permission (https://www.yourlocalguardian.co.uk/youngreporter/10192905.16-year-olds-shouldnt-have-to-vote/). If the state does not think 16-year-old person is responsible enough to make a decision that affects only himself, will he be responsible enough to make the right decision which might affects the whole country? The age at which people are considered "adult" is generally 18 rather than 16, so there is no reason why somebody aged 16 years should be allowed to vote.

16 -years -old People cannot make Important Decisions

Adult people of age of 18 could make a major difference, seeing as 18–24-year-olds have evidently shown that young people take little interest in the elections. A group people of age of 16 years are recognized too young to make such an important decision if they would be asked whether they thought the age to vote should be lowered. According to psycho-social studies, 16- year -old people may be easily influenced by propaganda, the opinion of public figures and what the majority of society thinks.

Psycho-social Negative Effects

Lowering the voting age from 18 to 16 might put the country at a serious disadvantage. Also, the poor education on political/economic and social issues, even if it is not their fault, immature and uneducated votes can make little or poor promises for the country. At the age of 16, teenagers sometimes continue to behave like immature and have not learnt enough through their education or from their personal experiences. The right to vote before they

are provided with an education of politics is almost an ideal concept (Laurence Steinberg, "Why We Should Lower the Voting Age to 16," nytimes.com, Mar. 2, 2018). It should be in the political discourse how to judge on which policies can be good for the country, and how to benefits from them.

Conclusion

Albania has done recent years significant progress and experience to guaranteeing the right to vote. The right to vote at the age of 16 exists in many other countries of the world, such as Austria, Germany, USA, Scotland, Norway, Brazil, Argentina, New Zealand, etc. Across the world, for many years, many youth movements are advocating for the voting age to be set for 16 years old.

The consequences of many protests and civil movements spearheaded young people, the debate of lowering the voting age from 18 years to 16 years old, continue to be an open debate among people and countries. While some states in the world currently allow 16-year-olds to vote, many states have experienced consequences that proposed a lower voting age, citing immaturity and insufficient civics knowledge as their reasons.

In order to understand the pros and cons of lowering the voting age, we should look into both sides of the issue. From the other side, this increased political discourse between teenagers, teachers, parents, grandparents, and so on, makes these groups more likely to vote as well. The mass expansion of civic engagement is vital to democracy as it empowers citizens to be well-informed and to fight for the changes they'd like to see.

For the reason of increasing the civic participation of young people, especially teenagers, lowering the voting age will also increase youth representation in politics. Sure enough, teenagers can have little contribution in state policies, who make decisions on issues that affect teenagers' futures. As a matter of fact, teenagers have to struggle to bear the brunt of those decisions as they grow up. They have insignificant voting ability to give a platform to state policies. Their ideas and decisions should be heard, and lowering the voting age will allow for this. Moreover, politics and government the most important thing is in tackling global issues, and the need to expand civic participation is more crucial than ever. Reducing the age of vote might influence on increasing political involvement and give life to those who have a vested interest in solving these issues, making it an important step forward for the democracy.

Albania has made many significant steps towards democracy, mainly by having positive experience to guaranteeing the right to vote. Some active Albanian NGO's have started public consultations with target-people (teenagers and young people) on how to improve democracy in the respect for children and youth rights. So, supporting the empowerment of teenagers and youth participation in decision-making, the main focus of interest remained the reduction of voting age to 16.

The question of lowering the voting age insights us to further political, civil and social engagement. The right to vote of youth people can empower the political participation, as well as representation of teenagers in all country's processes. Access to education, technology, or experience in decision-making in society had become a potential manner for teenagers and youth people to participate and practice their rights.

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Exploring Taiwan Indie Musicians' Skills Development: Case Study on Band Practitioners

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Abstract: Over the decades, digital technology, social media, online streaming and subscription has changed the global music industry. Music nowadays can be created, produced, disseminated, exhibited and consumed online via the Internet. Taiwan Ministry of Culture has made a lot of efforts by launching subsidy program since 2007, holding music awards such as GMA and GIMA, founding international music media platform Taiwan Beats etc.; aimed to encourage creativity and further promote Taiwan culture to the world. Taiwan indie music burgeon despite internal and external changes. They carry out DIY by following autonomy, some produce and promote their work either through collaborating with indie labels yet some even start up their own company. Either way demonstrates entrepreneurship, these musicians are practitioners bear with risk-taking while managing resources in order to sustain music creation and career. Taiwan indie music sector is learning step by step from both success and failure and transforming personal passion into professional know-how. Furthermore, indie musicians/bands have gradually taken over the Mandopop market by winning awards in GMA/GIMA. Perform actively and embark on world tours, translocal collaboration, indie musicians/bands are embracing the global music market, building networks and fanbase worldwide. Regarding to the above, this research aim to develop a guideline for indie musicians who attempt entrepreneurship in the future. To meet the research objectives, this research will conduct case study on Sunset Rollercoaster, to understand how they develop entrepreneurship and skills through managing their organization and projects. In-depth interview with band members will be conducted to collect data and semi-structured interview with other indie musicians is anticipated to gather feedbacks and refine the guideline with their opinions.

Keywords: Indie music, Indie practitioners, Project management skills, Skills

Introduction

In the past three years, the world was impact with the pandemic and so did the music industry. Numbers of office were shut down, projects were forced to pause and countless physical events including concerts, music festivals were cancelled. However, according to the Global Music Report 2021 published by International Federation of the Phonographic Industry (IFPI), the global recorded music market grew by 7.4% with the rising subscription revenues of online streaming platform that compensated the declining physical or other formats revenues.

Indie music has been the thriving sector that grown fastest amongst the global music industry since 2020, as MIDiA presented that the independent revenue grew from 33.9% to 43.1% measuring on ownership basis (revenue measured by the music rights holder, including indecent labels and self-releasing artists) instead of distribution basis (revenue measured by the label that distributes the music).

Online streaming platforms for example Spotify, Apple Music, Amazon Music, Tencent Music, YouTube Music etc. have grown rapidly especially during the pandemic. People have gained emotional wellbeing through music and have shifted from offline events to online listening and thus contributed to the global music market revenue growth with subscription. Evidence from the IFTP report indicates that 2020 was the strong year for streaming, which was the dominant format and accounted for 62.1% (see Figure 1) of global record music revenues. From the perspective of indie musicians, online streaming has enabled them to distribute and promote music beyond border and provided them huge chances to be seen by the audience worldwide. Since indie musicians and labels can spread their works online, they have become one of the key partners in the music industry network.
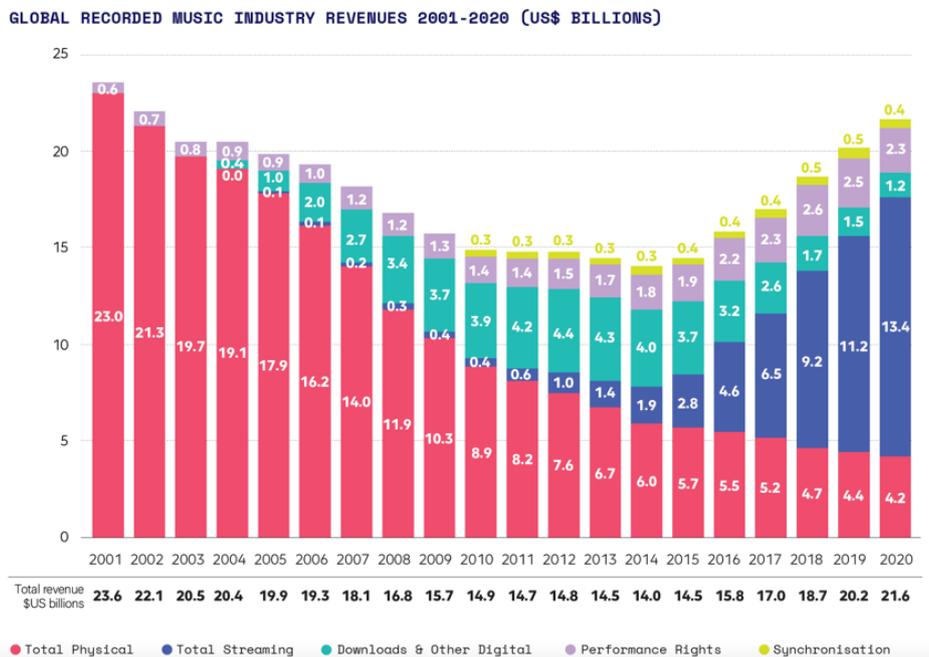

Figure 1. Global Recorded Music Industry Revenues 2001-2020

Source: Global Music Report, 2021 published by International Federation of the Phonographic Industry (IFPI)

Taiwan Indie Music Sector

The music industry in Taiwan as well benefits from cross border Internet (Jian, 2019), and quite optimistic toward future growth which we can observe from the 2020 Pop Music Industry Report by Taiwan Creative Content Agency (TAICCA). First, the music industry has benefit from the online streaming services, accounted for 75.25% in total revenue (21.24 billion) and has grown to 3.88% compared to revenue in 2018. Second, the growth rate of music firms including recording, publication, online streaming, live performance, venue management and even

planning/executing has increased to 1.93% compared to numbers in 2018. And we can expect that there will be more music related companies in the coming future.

Now let us zoom in to the indie music scene. As a matter of fact, indie musicians have gradually emerged on mainstream, more and more indie bands for example Sunset Rollercoasters, No Party for Cao Dong etc. won the GMA (Golden Melody Awards) Best Band Award over past years; and Flesh Juicer won multiple awards in the GIMA (Golden Indie Music Awards). All to all, this offers the researcher the opportunity to explore its dynamic context; hence the purposes of this research are elaborated as below (see Table 1):

Table 1. Research Questions and Objectives of this Paper

	Research Questions	Research Objectives
1	What is the complexity of music career?	To identify driving factors of indie music career.
2	• How do indie practitioners sustain their career trough projects? • What skills do they demonstrate while managing projects?	To understand the professional skills and the relationship of projects of the indie practitioners in Taiwan.
3	What is the guideline with skillset for indie practitioners to refer to?	To develop the self-evaluation form for indie musicians who attempt to take music as a full time job.

Source: Researcher

Literature Review

Autonomy Matters toward Creative Industries Workers

The Independence of the Creative Industries

Leadbeater and Oakley (1999) described creative industries workers as the independence. They would rather be self-employed or start micro-entrepreneurship because independence will give them a sense of authorship and ownership, which is the best way for them to develop their own work. Indeed, indie musicians in Taiwan advocate independence; they produce artworks and pursue musical aesthetics through DIY instead of surrendering to commercials (Jian, 2013). This DIY autonomy gives musicians sense of control and belonging and fuels creative inspirations (Walzer, 2017).

The Indie Spirit: Autonomy and DIY (Do-it-Yourself)

The term "indie" refers to implicit meaning of liberty in organization, production, and distribution (Rowe, 1995); and not being produced by major international record companies e.g. Universal, Sony Music, EMI (Hibbett, 2005). Artists and musicians create music with their own culture and lifestyles which contrasts with traditional music industry by following their own production politics (Jian, 2013). Just as the uniqueness of indie music, allowing

indie musicians to express their artworks with personal aesthetics, to sustain their creativity and to experiment various approaches along the cultural cycle from creation to exhibition.

Creative Industries Organized on a Project-by-project Basis

Creative Organization based on Projects

Creative industries rely on one-off products and novelty as sources of value. In industries such as advertising, music, and design, firms are shifting towards project-based modes of work organization to mitigate risk and remain innovative (Davies & Sigthorsson, 2013). Thus, to understand skills development of indie bands' practitioners, this research will explore skills that are demonstrated and learnt in the aspect of project lifecycle.

Project Lifecycle

Gray et al. (2006) illustrated project lifecycle (see Figure 2) in four phases in terms of level of effort and time dimension. A project is born and delivered through: 1) defining, to identify needs and goals and further establish feasibility, 2) planning, to schedule tasks and allocate resources e.g. budge, 3) executing, to implement tasks and monitor progress and 4) delivering, to close the project and learn from it. As literature has shown that organizations in the creative industries tend to be more project oriented, this research will conduct case study by combining the above theories to study skills demonstrated and learnt by indie band practitioners in projects.
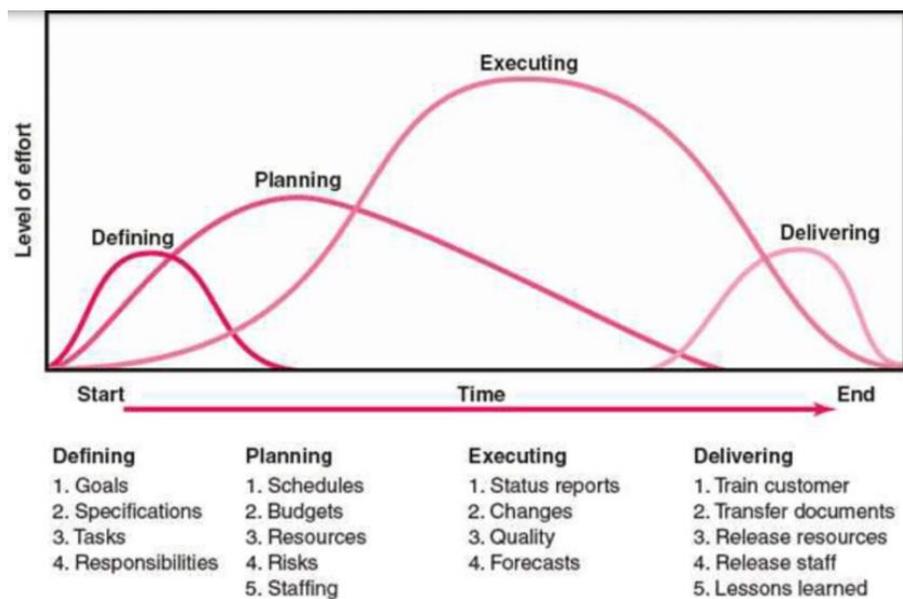

Figure 2. Project Lifecycle (Gray et al., 2006)

Source: Slideshare https://www.slideshare.net/craigwbrown/the-project-management-process-week-1/29-Figure_11_Project_Life_Cycle

Sharpening Skills to Sustain Music Career

Indie Musicians in the Era of Digitalization: Skills learnt via the Internet

Technology growth facilitates the music industry. Laptops, computers, tablets, free digital audio workstations, small audio interface and software enhance the way independent musicians produce materials and distribute ideas quickly. Novice musicians and producers can learn techniques through online tutorials, forums and websites; record vocals with USB microphone or smartphones and then upload files to social networking websites (Walzer, 2017) such as YouTube, SoundClound, Bandcamp etc.

Skills and Music Career

Leadbeater and Oakley's (1999) has pointed out that the creative workers need to develop a mix of creative and business skills at different stages of their careers. However, they often lack and do not know how to acquire the business skills and support they need to grow a company; these sectors are often chronically unstable and unpredictable. Indeed, many creative workers become micro business and embrace entrepreneurship, simply because they are particularly interested in creative activities rather than growing a successful business. Recent studies on cultural and creative entrepreneurs have also suggested that creative workers to adopt entrepreneurial mindset, and to cultivate skills on seeking for investments, marketing and managing online/offline relationship within networks due to cultural entrepreneurship is more easily linked with precarity rather than sustainability (Baym, 2012; Whitson et al., 2021). Hence, skills on planning and managing are needed (Davies & Sigthorsson, 2013).

Recent studies on creative workers' skills of creative industries elaborated that those creative workers themselves need to carry out multiple tasks not only in song writing and performing, but skills related to new media appliance, problem-solving, networking, financing, organizing, managing and marketing (Harcs and Leslie 2014; Hracs 2015; Hennekam and Bennett, 2016; Haenfler 2018; Everts et al., 2021).

Method

This research aims to explore skills development of indie band practitioners and thus qualitative research will be conducted to understand individual experiences and how they interact with the social world (Jones et al., 2015). Single case study will be the approach to truly understand indie practitioners' experiences, attitude and values in their real-life settings (Crowe et al., 2011); and further gain insightful discussions and implications under Taiwanese indie music context.

Research Design

To achieve the research objectives, this research will be conducted based on the structure as illustrated in Figure 3. Firstly, starting with literature review and secondary data collection on the indie music industry and government documentation to understand the overview background of the CI and the music sector; secondly, interviewing indie practitioners to gain general understanding of the music industry. Certain criteria will be set based on

literature review before selecting the case.

The researcher will engage with the cases through semi-structured interview intending to find out empirical experience laid behind; Nvivo analysis is expected to be adopted. Questionnaire will be carried with indie musicians both novice and experienced ones to collect feedbacks and suggestions on the initial guideline (see Figure 3).
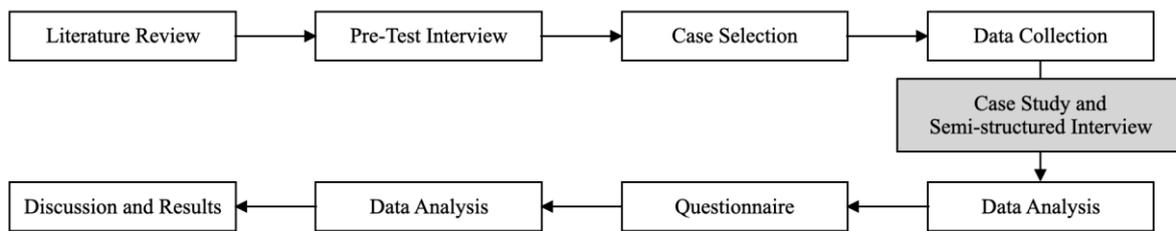

Figure 3. Research Structure

Source: Researcher

Results and Discussion

Pre-test Interviews

This research has conducted 4 semi-structured interviews with 1 indie artist and 3 indie bands at the phase of pre-testing (see Table 2). The researcher adopted the project lifecycle theory and integrated a skill radar (see Figure 3) based on literature review to further formulate a hypothesis about skills demonstrated and learnt in delivering projects. The semi-structured interview included topics on 1) their thoughts about Internet and online streaming, 2) their experiences of managing projects, 3) their reflection on skills.

Table 2. Pre-test Interviews

| Interview	Type of Indie: Individual or Band	Interview Form	Time Duration	Year of Formation
Interviewee A	Individual Artist	Face to face	20 mins	2010
Interviewee B	Band (Vocal and leader of the band)	Face to face	1 hr 50 mins	2016
Interviewee C	Band (Vocal of the band)	Face to face	1 hr 40 mins	2010
Interviewees D	Band (5 members altogether)	Face to face	1 hr 40 mins	2010

Source: Researcher
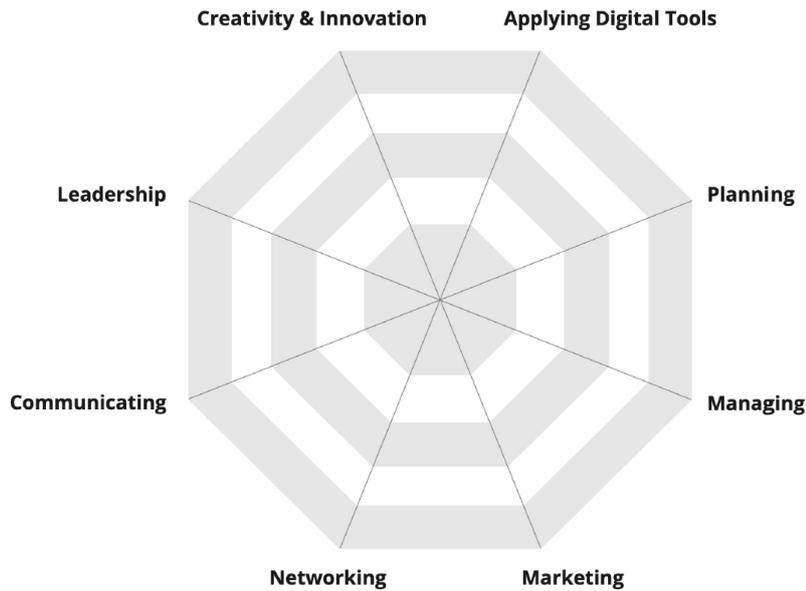
Figure 3. Skill Radar of Indie Musicians

Source: Researcher

Findings from the Pre-test Interviews

1) Skills are addressed more with Indie Musicians who have no Agent

Indie bands uphold DIY and value autonomy, most of them are self-managed rather than collaborating with agents. When given the questions on reviewing past projects and skills, interviewees without agent emphasized much more portion on managing, communicating, managing, marketing, networking and planning skills (see Figure 4).
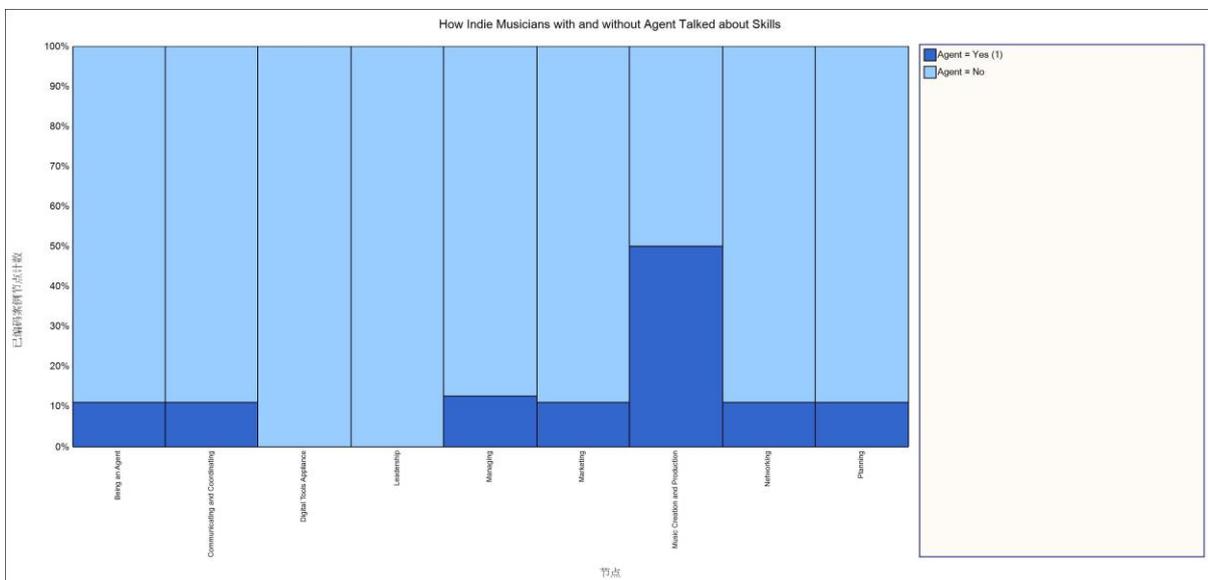

Figure 4. How Indie Musicians with and without Agent Talked about Skills

Source: Researcher

As a matter of fact, musicians value music creation and production and take it as the spirit of their music career, however, they are occupied with various tasks related to their performances, promotion, merchandising, external collaboration etc. They believe that if they had an agent who could handle all sorts of activities and work tasks, they would be able to focus more on music itself:

> I feel that our band need an agent……the benefits of having an agent is that, you get to concentrate on making music, you do not need to spend time on dealing with external collaborators. (Interviewee B, March 22th , 2022)

2) Role in the Band: Leader emphasizes more on Skills

Indie bands are formed with at least 2 members in general, and the role in the band matters. The members who play as the leader emphasize significantly more on communicating and coordinating as well as being an agent, leadership, managing, marketing and planning (see Figure 5).
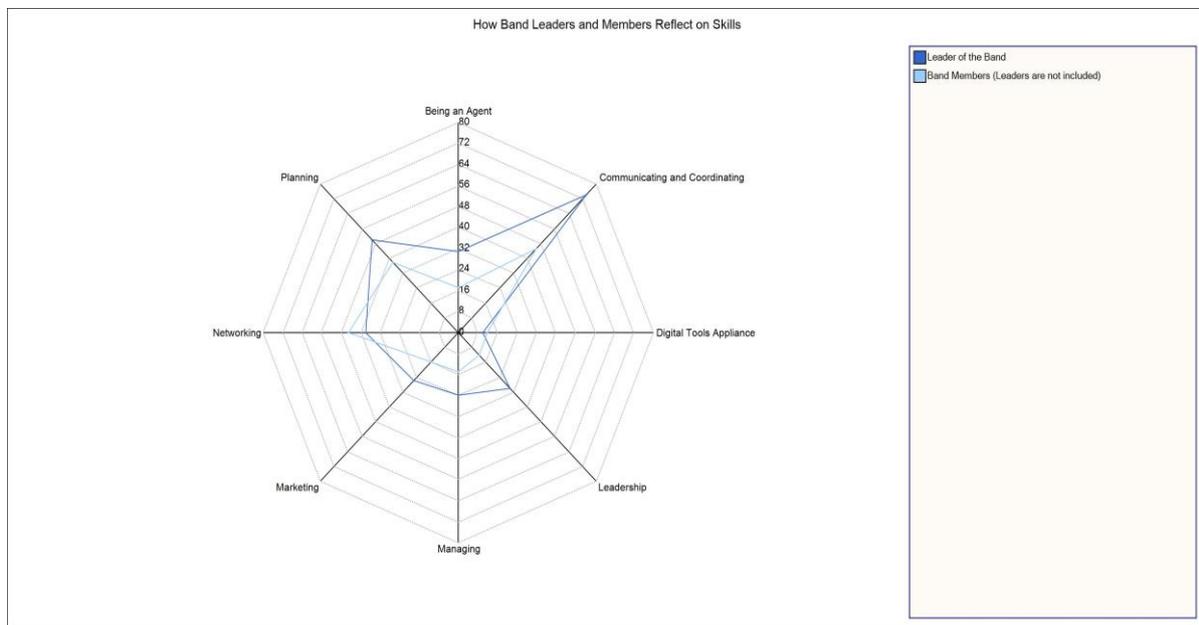
Figure 5. How Band Leaders and Members Reflect on Skills
Source: Researcher

They regard communicating as the most important skill that every project need proper and clear communication:

> You have to communicate with both music fans and band members……indie music is very romantic, all the artists are romantic…...but I hate being ambiguous……it is about how you have to learn to propose concrete needs in this emotional-driven industry while maintaining the atmosphere, I think this is very important. (Interviewee B, March 22nd, 2022)
>
> I think that communication is super-duper important. You not only communicate internally but externally. You must convey your needs, yes, it is very important that you express your thoughts and ideas clearly. (Interviewee D, April 12th, 2022)

3) Project Lifecycle and Skills

Indie bands are aware of sustaining their career through growing internal projects such as making album/EPs/singles, attending/holding gigs, launching merchandises etc.; external projects such as commercial collaboration, co-branding etc. Executing project is the most challenging phase for the interviewees due to unexpected incidents may occur and thus interviewees remarked relatively high portion on networking, communicating and managing skills for them to obtain and organize resources. Communicating and coordinating skill was the most brought up issue when the interviewees were given questions on reflecting their previous projects (see Figure 6).
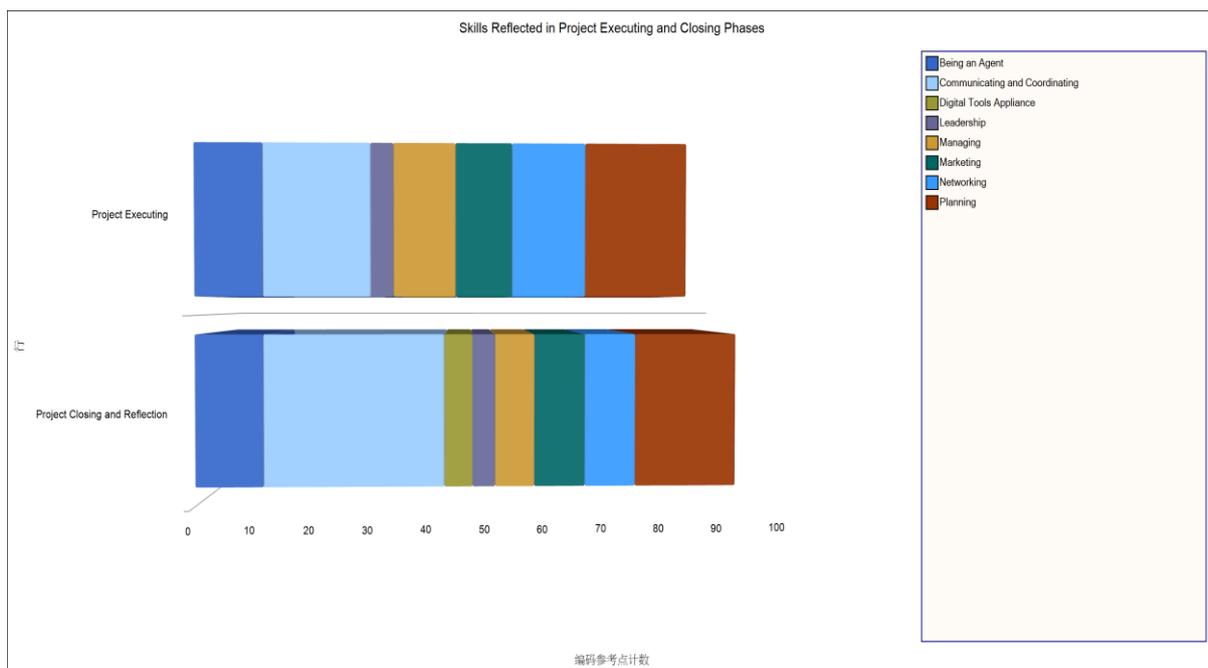
Figure 6. Skills Reflected in Project Executing and Closing Phases

Source: Researcher

Conclusion

This research is still ongoing. Case study with in-depth interview will be conducted to further verify findings in the pre-testing phase. Nvivo analysis will be used as qualitative approach to develop insights of skills development in the context of Taiwanese indie band practitioners'; and questionnaire will be designed afterwards according to issues found in pre-test interview and case study to further understand how general band practitioners perceive and reflect on personal skills. A practitioner guideline with skillset is expected to be the outcome of this research for indie novice and cultural entrepreneurs to refer to; hence contribute theoretically to the creative industries and practically to the indie musicians/bands.

Notes

Indie Musicians: Referring to musicians who uphold autonomy and make/produce music through DIY instead collaborating with domain music companies such as Sony, EMI, Universal etc.

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Analysis of the Problems of the Turkish Education System in Terms of the Elements of Educational Programs

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Abstract: The aim of the study is to examine the problems of the Turkish education system in terms of the elements of the education programs. This research was carried out according to the case study model, which is one of the qualitative research methods. The data of the study were collected through face-to-face interviews conducted through a semi-structured interview form with 50 teachers who work in various branches in public schools in the city center of Erzurum in the spring semester of the 2021-2022 academic year and who voluntarily supported the research. The data obtained in the study were interpreted by conducting content analysis. According to these results obtained from the research, it is possible to say that the problems experienced by the teachers in the context of reaching the goals of the Turkish education system are due to the exam-oriented education approach, the fact that the goals are not compatible with daily life, the lack of application direction, consisting mostly of theory-based information, and the low motivation of the students in the lessons. The results obtained from the research, it is seen that the problems experienced by the teachers in order to realize the content of the education in the Turkish education system arise from the inconsistency of course hours and the intensity of the subjects, the transition gaps between the subjects and the disconnections between the subjects and the applied activities. Other results obtained from the research, they stated that the problems experienced by the teachers in terms of the educational situations of the Turkish education system stemmed from the fact that the students did not participate in the lesson actively, and therefore, the teachers could not get enough feedback from the students in the educational environment.

Keywords: Turkish education system, Elements of educational curriculum, Problems

Introduction

The most basic expectation of education for the phenomenon; is to raise individuals who respond to the needs of today's life, question, think, criticize, research, struggle, produce, wonder, have an entrepreneurial spirit, can follow the developments in the world, contribute to social life and respect universal values (Hareket, Erdoğan ve Dündar, 2016; Anıl, 2009). Although there are many studies in the relevant literature that examine the problems of the Turkish education system from past to present from various angles and offer solutions, it seems that the expectations cannot be fully met. In addition, when the relevant literature was examined, no other study was found

that examined the problems of the Turkish education system in terms of the elements of educational programs in accordance with the views of teachers. It is thought that this study will be an important source for the relevant literature in order to describe the situation of the Turkish education system in terms of the goals, content, educational situations and measurement and evaluation elements of educational programs, if any, and to identify its current problems. The aim of the study is to examine the problems of the Turkish education system in terms of the elements of the education programs. For this purpose, the answers to the following questions were sought.

1. What are the problems you face in terms of achieving the goals of the education?
2. What are the problems you face in terms of implementing educational content (topics, scope, curriculum, content, units, themes)?
3. What are the problems you encounter in terms of educational situations (How will we teach-strategy, methods and techniques, reinforcement, participation, feedback - correction, approach)?
4. What are the problems you face in terms of assessment and evaluation (How much do we teach)?

Method

The Model of the Study

This research was carried out according to the case study model, which is one of the qualitative research methods. Case study is a research method used in cases where there is more than one evidence or data source that examines a investigated phenomenon within its own framework, where the boundaries between the phenomenon and the content in which it is located are not decisively defined (Yin, 1984). Qualitative research can be defined as a research in which qualitative data collection methods such as observation, interview and document analysis are used, and a qualitative process is followed to reveal perceptions and events in a realistic and holistic way in a natural environment (Yıldırım and Şimşek, 2011). In this study, face-to-face interviews were conducted with the participants who voluntarily supported the research. According to Fraenkel, Wallen & Hyun (2012), the purpose of interviewing the participants is to reveal what they have in mind and what they feel about the subjects on the studied subjects.

Study Group

The study group of this study consists of a total of 50 teachers who work in official public schools in the city center of Erzurum in the spring semester of the 2021-2022 academic year and who voluntarily support the study. In this study, since it was thought that it would be more practical to work with a familiar group because it would be quicker and cost-effective to reach the participants, the study group of the research was determined by easily accessible case sampling, one of the purposive sampling methods (Yıldırım & Şimşek, 2011). Purposive sampling allows for in-depth research by selecting information-rich situations in accordance with the purpose of the study. It is preferred when it is desired to work in one or more special cases that meet certain criteria or have certain characteristics (Büyüköztürk et al., 2013).

Data Collection

The data of the study were collected through face-to-face interviews conducted through a semi-structured interview form with 50 teachers who work in various branches in public schools in the city center of Erzurum in the spring semester of the 2021-2022 academic year and who voluntarily supported the research. Face-to-face interviews lasting approximately 10 minutes were conducted with each of the participants who voluntarily supported the research. The data obtained from the participants were coded as T.1 and T.50 in terms of coding convenience and confidentiality of personal data.

Data Analysis

The data obtained in the study were interpreted by conducting content analysis. The goal of content analysis is to reduce the words in a research text to a smaller number of content categories (Creswell, 2013). Analysis studies were carried out on the obtained text. The analyses performed were evaluated by two expert researchers and the validity and reliability of the analyses were tried to be increased.

Results

Under this heading, the responses of the teachers in the study group to the research questions related to the problems of the Turkish education system in terms of the elements of educational programs are presented and interpreted in the form of tables.

Distribution of the opinions of the academicians on the question Q.1) "What are the problems you face in terms of realizing the educational goals?"

According to Table 1, teachers expressed their opinion about the problems they face in terms of achieving the goals of education in the form of the most exam-oriented study approach (f:17). Then, the teachers, respectively, stated that the goals are not compatible with real life (f:11), the understanding of education based on theory rather than practice (f:8), the low level of preparation of the students (f:7), the excessive period of compulsory education (f:6) and the negative effects of technology on children. In addition, teachers expressed an opinion that students not focusing on any goals (f:5), neglectful parents (f:4), the understanding of essentialist educational philosophy in education has not been abandoned (f:3), and classrooms are overcrowded (f:2) regarding the problems they face in terms of achieving educational goals. According to these results obtained from the research, it is possible to say that the problems experienced by the teachers in the context of reaching the goals of the Turkish education system are due to the exam-oriented education approach, the fact that the goals are not compatible with daily life, the lack of application direction, consisting mostly of theory-based information, and the low motivation of the students in the lessons.

Table 1. Distribution of the Answers given by the Teachers to the Question about the Problems they face in terms of realizing the Educational Goals

	f
Exam-oriented study approach	17
Goals not being compatible with real life	11
An understanding of education based on theory rather than practice	8
Students have a low level of preparation for classes	7
Excessive period of compulsory education	6
Negative effects of technology on children	6
Students not focusing on any purpose	5
Neglect of the parents	4
The fact that we have not given up on the essentialist philosophy of education in education	3
Overcrowded classrooms	2
Total	**70**

Distribution of the opinions of the academicians on the question Q.2) "What are the problems you encounter in terms of realizing the educational content (topics, scope, curriculum, content, units, themes)?"

According to Table 2, the teachers stated that the intensity of the subjects and the lesson hours were mostly inconsistent (f:26) regarding the problems they encounter most in terms of realizing the content of the education. Then, respectively, the teachers stated that there were transitional gaps between the subjects (f:14), there were gaps between the subjects and the applied activities (f:12), that the subjects were more advanced than the grade level (f:5) and that the subjects were taught superficially (f:4) regarding the problems they encountered in terms of realizing the content of the education. According to these results obtained from the research, it is seen that the problems experienced by the teachers in order to realize the content of the education in the Turkish education system arise from the inconsistency of course hours and the intensity of the subjects, the transition gaps between the subjects and the disconnections between the subjects and the applied activities.

Table 2. Distribution of Teachers' Responses to the Question about the Problems they face in terms of realizing the Content of Education

	f
Inconsistency of subject intensity with class hours	26
Transition gaps between subjects	14
Disconnection between the subjects and the applied activities	12
Subjects being more advanced than the grade level	5
Teaching the subjects superficially	4
Total	**61**

Distribution of the opinions of the academicians on the question Q.3) "What are the problems you encounter in terms of educational situations (How will we teach-strategy, methods and techniques, reinforcement, participation, feedback – correction, approach)?"

According to Table 3, teachers stated the most that students did not participate in the lessons effectively (f:16) in relation to the problems they faced in terms of the state of education. Then, respectively, the teachers stated that they could not get enough feedback from the students regarding the problems they faced in terms of educational status (f:12), that the students did not fulfill their responsibilities (f:10), that they did not have time to apply methods and techniques in a way that would take into account the individual differences of the students (f:12). 5) that there are deficiencies in the student discipline regulations (f:5) and there are deficiencies in the educational materials (f:4).

Table 3. Distribution of the Answers given by the Teachers to the Question about the Problems they face in terms of the Educational Situations

	f
Students not attending classes actively	16
Not getting enough feedback from students	12
Failure of students to fulfill their assigned responsibilities	10
Lack of time to apply methods and techniques to take into account individual differences	5
Deficiencies in the student discipline regulation	5
Deficiencies in the required educational materials	4
Total	**52**

According to the results obtained from the research, they stated that the problems experienced by the teachers in terms of the educational situations of the Turkish education system stemmed from the fact that the students did not participate in the lesson actively, and therefore, the teachers could not get enough feedback from the students in the educational environment. In addition, regarding the problems they experience in terms of their educational status; it is possible to say that they are caused by the students not fulfilling the responsibilities given to them, not being able to implement teaching methods and techniques that will highlight the individual differences of the students to the classroom environment in a way that will provide richness due to lack of time, deficiencies in the student discipline regulations and deficiencies in the educational materials.

Distribution of opinions of academicians on the question "Q.4) "What are the problems you face in terms of measurement and evaluation (How much do we teach)?

According to Table 4, teachers stated using result-oriented assessments and evaluations (f: 19) the most regarding the problems they encounter in terms of assessment and evaluation. Later, the teachers, respectively, stated their

opinions related to the problems they encountered in terms of assessment and evaluation as; the pandemic negatively affected the assessment and evaluation process (f: 15), that the common exam practice in schools affected the assessment and evaluation process negatively (f: 10), and that due to time problems, appropriate exams could not be made for students' individual characteristics(f:6). In addition, regarding the problems they encounter in terms of assessment and evaluation, the teachers stated that there is no exam week practice in formal education institutions (f: 2), no exams to measure students' high-level thinking skills (f: 1), and the social development of students is not fully evaluated (f1).

Table 4. Distribution of the Answers given by the Teachers to the Question about the Problems they face in terms of Assessment and Evaluation

	f
Implementation of result-oriented assessment and evaluation understanding	19
The negative effects of the pandemic process on the assessment and evaluation process in educational settings	15
Negative effects of joint exam practice on the process	10
Due to the time problem, it is not possible to make exams suitable for the individual characteristics of the students	6
Not including the implementation of exam week in formal education levels	2
Being unable to take exams to measure students' high-level thinking skills	1
Failure to fully assess students' social development	1
Total	**54**

According to these results obtained from the research, they stated that the problems experienced by the teachers in terms of assessment and evaluation of the Turkish education system stemmed from the fact that they mostly included result-oriented measurement and evaluation practices by themselves, rather than the input, process and result-oriented evaluation approach. In addition, the teachers stated that the problems experienced by the Turkish education system in terms of assessment and evaluation are caused by the measurement and evaluation approaches in educational settings implemented under the influence of the pandemic and the risks posed by the application of the joint exam. In accordance with these results, the following study-related recommendations can be made.

- It may be useful to review the Turkish education system in such a way as to increase the compatibility of educational goals with real life by moving away from an exam-oriented educational approach.
- A reassessment of the intensity of subject areas in accordance with the scope of the class hours may benefit the process.
- Scientific events can be organized for teachers, students and families on how to ensure the active participation of students in classes.
- Studies that will increase the use of input-, process- and result-oriented system evaluation approaches that are necessary for a constructivist understanding of education by teachers in educational settings may be included.

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Redesigning a Trustworthy Trading Platform: The Application with NFTs and Its Individual Investors

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Abstract: User experience is a very important element of platform design. Its framework and development process has been developed in academia and industry for more than twenty years. The development of digital finance has been accompanied by the emergence of blockchain, and various platform services have also appeared in the cryptocurrency market. Among them, the non-fungible token (NFT) market in the past two years is growing fast. It used blockchain technology to mint a digital file (including pictures, videos, 3D models, etc., game props...) into non-fungible tokens (NFTs), use coding to prove the ownership of digital assets, and develop a trading platform and conduct transactions. Starting from the user experience, the importance of users' trust in the platform is rising. By literature review, I found out that many pieces of literature do research about trust, but most of them are quantitative research, there is still no relevant research based on a user experience perspective. NFT platform as a startup platform has only 3 years of history, in the high volatility, risky NFT market, individual investors who have no experience in the investment market are more at a loss. In emerging cryptocurrency platforms, the user's trust in the platform is a particularly important element. This research tries to take the trust in the user experience especially "trust" as the core of research design. The research will use a pre-survey to investigate NFT buyers first, then do user research on the biggest secondary NFT trading platform "Opensea" as user testing and user interview field, to know how much trust that user wants to give to the platform. After user studies, I will design a new NFT trading prototype with UX design software Figma, and make design suggestions to enhance users' "trust" for those teams who want to develop crypto-related platform services.

Keywords: User experience, User interface, Platform design, Non-fungible tokens, Cryptocurrency, Trust

Introduction

The word "UX" is user experience, it means the experience of the interaction between humans and systems. (Norman, D., 1995), include the sense and feedback after users touch a service, product, or system. It also defined the user's mood, physical and psychological response, Sources of behavior, and achievement. (ISO 9241-210:2019). Crypto finance will become an integral part of the future financial market (KPMG, 2018), trust is the most important thing in user decisions making especially in fintech & cryptocurrency development. (BA Ramadhan, BM Iqbal, 2018)The biggest NFTs trading platform OpenSea has sold more than $13 billion worth

of NFTs so far this year (ABMedia, 2021). From E-commerce to the NFT trading platform, it is such a new type of service that people are still not familiar with it, also, the cryptocurrency is still in beginning, it is very volatile and high risk making people difficult to start.

Due to the 2009 global financial crisis, blockchain has been used for financial services, providing new industrial transformation for financial innovation, business model innovation, financial services mobilization, and platformization. (Xie Renjun, Lin Yaojie, 2020). Digital finance compared to other kinds of digital service, they are usually more complicated than other services, the process is too long to make users feel difficult to learn & use, making UX essential and more important in digital finance. (Leon Szeli, 2017). NFT's full name is the non-fungible token, it uses blockchain technology as the core, and it has all the characteristics of blockchain, such as decentralization and tamper-proof (ABMedia, 2020). NFT could be said to kind of proof of ownership based on blockchain technology, recording the transaction of digital files. it can also be used for asset proofs, certificates, electromagnetic coupons, and tickets. NFT is easily transferable and tradeable on the blockchain network without a middleman. (BA Ramadhan, BM Iqbal, 2018), for example, Sothebys announced the release of the NFT platform "Sotheby's Metaverse", Sotheby's Metaverse visitors can view crypto artworks in an auction and know the collectors and artists behind the platform (Sothebys metaverse, 2021).

Literature Review

This chapter will see the history of UX, try to figure out what UX can help a new cryptocurrency platform design, to explore and tide up what UX elements could be used to help our prototype development. In the literature review, we found out there are many words related to trust, we will sort out the definition of "Credible", "reliable" and "trust" from the literature of NNgroup, give a definition to explain what UI/UX could make user feeling "trust".

Difference between Trust, Reliability, and Credible

In this section I will define the "trust & credible" by NNgroup research, also do a comparison of three words Don Norman can be said to be the person who defines the term UX, the NNgroup in founded by Jakob Nielsen and Don Norman in 1988 as a UX design consultant group. In google scholar, it will show some different results:

(1) Trust & credibility

The difference between trust and credibility is based on NNgroup and interaction design foundation's article, creating credibility on the web to make users trust the web would be the most important thing in a digital service. (Aurora Harley, 2016) also, their relationship is shown in Figure 1.

(2) Reliability

Reliability is used in security, speed, and system stability-related literature (Pallabi Roy Singh, 2020), even when we type reliability in google scholar we can't find many things related to UX, so reliability must be separate from our research to prevent chaos.
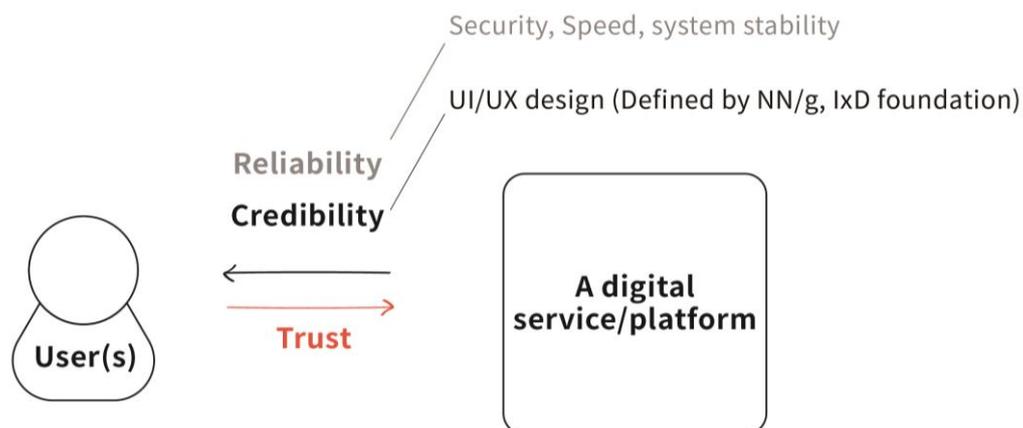

Figure 1. Relationship between Trust, Reliability, and Credibility (Source: Researcher)

Trust in UX: 4 Credibility Factors

Here we can sort out 4 categories of the definition of "trust" based on literature from NNgroup called communicate trustworthiness, also take refer to suggestions from cryptocurrency, platform design literature.

(1) Design quality:
(1.1) Clear UI design

A professional UI makes users feel the web stable is needed, (Jakob Nielsen, 1999) for example, uses natural light colors like white & green, flat designs, minimalist style, and no typos. (Aurora Harley, 2016) To create familiarity with UI design, using commonly known facts to show users you're credible (John Geddes, 2016).

(1.2) UX with efficiency

A good process design, Clear guidance that conveys respect for customers, and an implicit commitment to good service (Jakob Nielsen, 1999), help the user to divide the functions they need, a service an 80% of users are using the basic function. Users usually use "trial and error" to choose the function their want, they need a clear leave to end the status they don't need (Jakob Nielsen, 1995).

(1.3) Consistency and standards

User should not need to guess different words, status, or movement is the same thing or not (Akanee Lee, 2013).

(2) Up-front disclosure:
(2.1) Present all information relates to the customer experience first

For *e*xample, show transport costs instantly rather than waiting until the user has ordered. Also it includes the status pages showing, button status showing, loading, and downloading pages (Jakob Nielsen, 1995).

(2.2) User curation of each other
Users should have a place to show what they got no matter photos or information, like commend functions could make people know the evaluation of an item (GG Parker, 2016).

(2.3) Humorous design

A happy feeling will lead to a higher level of trust. Also it motivates higher interaction between people and the system (A Mislin, LV Williams, BA Shaughnessy, 2015).

(3) Comprehensive, correct, and current:
(3.1) Show every picture

A product should show every perspective of a product.

(3.2) Show every process

People trust sites that make them feel in control. It shows every stage of the service, not just the final result, let users know which stage they are in (Aurora Harley, 2016).

(3.3) Identifying with risk

(4) Connected to the rest of the Web

People have learned to trust these external sources over company-sponsored content. Within and out links, there is no fear of linking to external sites. Especially in the NFT market, many items are constantly hyped on social media (A Mislin, LV Williams, BA Shaughnessy, 2015).

Method & Research Questions

RQ1. What is a trustworthy cryptocurrency platform from a UX perspective?

The objective here would be a literature review about the platform & cryptocurrency revolution, find out We captured the elements related to trust, and lastly, organize the elements related to trust from the UX perspective.

RQ2. What UX factors influenced individual investors' NFT trading?

This part would be the user research part, by analyzing our NFT platform first, actually, entering the platform, doing pre-investigation and interviews to understand the pain points of users, and then sorting out the problems to define a design principle for the prototype. UX & platform design frameworks are already developed for many years, but when UX pump into a new type of platform like NFTs –such high risky platform service to the user, "trust" becomes the best entry point to make UX face new things under this Fintech developing world.

RQ3. How to redesign a trustworthy UI/UX to enhance individual investors' trust when using the NFT trading service?

To design a prototype of NFT secondary market trading by pilot user research, case study, to stimulate the situation when individual investors use the NFT platform, do user research and revise our prototype, sort out users' feedback into a strategy in the end. Figure 2 shows the research structure.
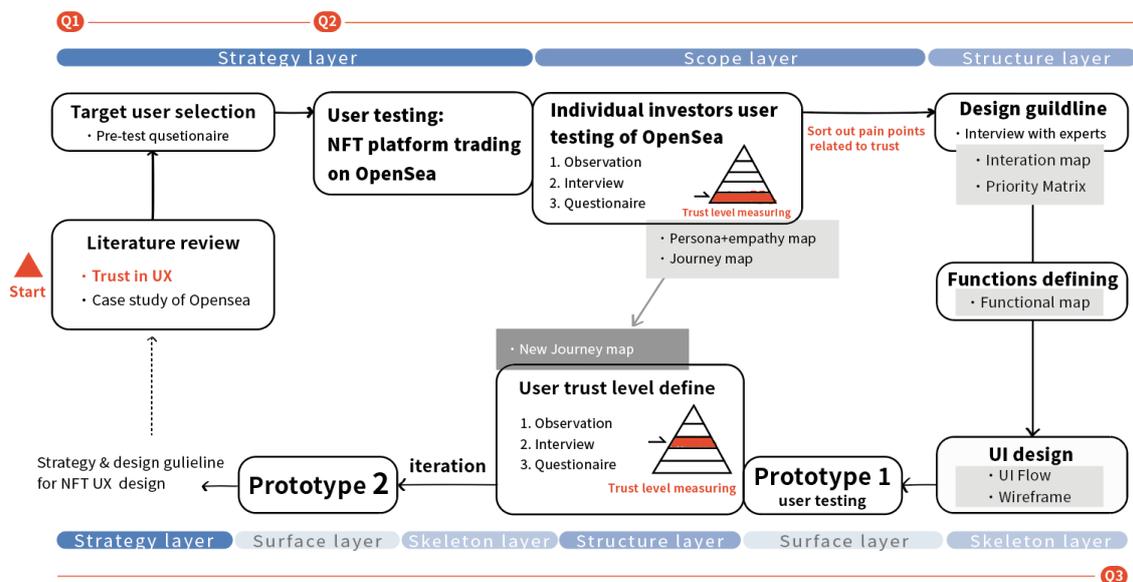

Figure 2. Research Structure (Source: researcher)

First, we will discover what kind of UX could make users feel trust combined with platform and cryptocurrency

literature. Next, I will learn from blockchain literature to know how NFT worked, then do the user testing of the biggest NFT trading platform "Opensea" to know the NFT trading process of individual investors in Opensea secondary market and what kind of problems that individual investors are facing, and then do user research with a questionnaire, interview, observation to define functions, to know what users care related to trust. In the end, build a prototype for user testing, the questionnaire to design a review prototype, make a before-after comparison between Opensea & prototype to sort out a strategy and conclusion.

Results

The research is now in the questionnaire distributed stage, it is already filled by 100 target users, who all have experience in NFT trading. The valid number of samples is 91, among them, t68 people have trading experience on my testing trading platform Opensea. most of them are from Facebook: NFT Chinese Community & Bitcoin Chinese Community (62%), NCKU Blockchain research club (15%), Ptt_digi currency forum (15%), and my friends Snowballing (8%). The questionnaire structure design is all based on my literature review, like credibility 4 factors from a UX perspective, it could be divided into 4 parts: users' data, their sense of NFT, trust, and experience at Opensea trading. The questionnaire surveyed users about "Do you think trust is important? ", and "what factors will influence your UX?" Here are some findings of the questionnaire:

Only 8 women responded to the survey, 75% of people have trading experience with Opensea and Young people from 18 to 35 are the majority. (77%) Also, most people think trust is important. (85%). For the cognition part, People think the biggest problem in the market is excessive speculation, followed by high transaction fees, confusing projects, and rampant fraud. Users mainly follow Discord, Twitter, and the NFT official website. For the trust part, People think the elements that influence their trust most at Opensea:

      1.Users can judge the value by information on the NFT page.

      2.Opensea should help users to recognize the risks.

      3. Humor design (only advanced users think it is important.).

For their using habits, most of the users are using a computer for trading (67%). Most people think the function that needs to be improved is the NFT exploration and the connection between platform and wallet.

Conclusion

The research will build a wire persona by questionnaire first, and pick up the interviewers who have willing to interview based on each persona. During the interview process, I will ask them more about their experience before if that UI element could influence their trust, and ask them to do trading on Opensea to observe the UX problems. Many people mentioned about they care about the functions of NFTs, many NFTs are just digital files, which is a way for people to judge their value. For the future interview, I will add more NFT utility parts to the interview structure. After analyzing the questionnaire and interviewers' data, I will use the prototype tool Figma for user testing, the UI prototype "Figma" is the biggest software for co-work & remote work. The

difference between Figma and other UI prototypes is the browser-based architecture, both Mac and Windows can be used, it can be said an innovation in interface design software.

Notes

User experience (UX):

The whole experience when the user interacts with a digital service, includes user research, user behavior analysis, and wireframe.

User interface (UI):

A medium when users interact and information exchange with a digital service, including visual design, animation, and fonts.

Non-fungible token (NFT):

Minted from a digital file, they could be pictures, short movies, game items, and 3D models, each token represents a unique digital item, an ownership tag based on blockchain technology.

Individual investors:

They are non-professional investors, using their own money do investment decisions, also Taiwan Stock Exchange defined A quarterly turnover value lower than $100 million NTD could be called an individual investor.

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Promoting Emotional Social Learning in Distance Learning through Book Creator

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Abstract: The COVID-19 lockdown has had emotional and psychological effects on students. The lockdown also compromised the ability of educational institutions to support social-emotional learning (SEL). The educational institutions stumble upon many challenges during that period as the semester continued while the students and teachers didn't arrive to the institution. This qualitative phenomenological study analyzed seven interviews in the interpretive approach of pre-service teachers. The pre-service teachers learned via the Book Creator, which is a digital platform for creating and sharing digital books. Therefore, we asked: What characteristics of social-emotional learning were expressed, according to pre-service teachers' perception who used Book Creator? The findings indicate three themes: social learning, ethics in learning and humanistic assessment. The students indicated that proper use of the Book Creator can bridge the complexity of teaching and learning during the pandemic and integrate the social-emotional learning principles while emphasizing the importance of ethics in learning.

Keywords: Social-emotional learning, Pre-service teachers' education, Ethics in learning, Learning during COVID pandemic

Introduction

During the Covid-19 pandemic, education systems operated under tight isolation measures. These conditions resonate the depth of the emotional and psychological consequences for most students following distance learning. Physical distance neutralizes personal approach, encourages a feeling of disconnection and social isolation. These negative emotions affect the process of acquiring knowledge and the involvement and motivation for learning. In fact, the ability of educational institutions to provide an environment that supports social-

emotional learning)SEL(has been compromised. The definition of SEL is diverse. There are those who define SEL as skills, attitudes, behaviors, cognitions, and feelings of success in school and in adult life (,.Omasta et al ,Zins & Elias, 2006). Others define SEL as the importance of the process of developing effective life skills ;2020 through the ability to identify and manage emotions, develop concerns for others, establish constructive relationships and address challenging situations and solve problems effectively)Pekrun, 2017(. The NCSL)The National Conference of State Legislator) defines SEL as "a wide range of skills, attitudes and behaviors that can ,affect a student's success in school and in life". Critical thinking, emotion management, conflict management decision making, and work staff are all skills that are not necessarily measured by tests, although they are crucial components in a student's education. These skills may affect his/her academic success, employment ability, self-esteem, relationships and civic and community involvement.

Research Questions

What characteristics of SEL were manifested during distance learning during the COVID-19 lockdown, according to the perception of the students who used BC?

Method

In this phenomenological qualitative study, which used the interpretive approach, seven interviews of students from the Department of Sciences at one of the largest teacher-training colleges in Israel were analyzed. The analysis of the findings was conducted through first and second coding analyses and the creation of categories that arose inductively from the interpretive analysis of the data)Saldaña, 2009).

Research Context

As an attempt to address the challenges of distance learning during the COVID-19 pandemic lockdown, a number of courses in the Department of Sciences at one of the largest teacher-training colleges in Israel used the Book Creator (BC). BC is a digital space for creating and sharing digital books. The lecturer opens a virtual bookshelf and shares it with the students. The students are required to open their own book, design it and add pages and content to it. It is possible to add texts, links, voice, images, and videos to each page. In addition, the virtual bookshelf is exposed for viewing by all course participants. The use of BC was created as a tool for ongoing alternative assessment. The lecturer administers the assignments through video and/or voice recordings.

Results

 Theresults .indicate three main themes that emerged from the analysis of the interviews. The first - social learning ,Regarding the possibility of watching the products of their classmates, one of the students stated: "... this learning from someone else, is like learning from a teacher. You want to see where you went wrong and where you were right. People want to learn together. You do not want a teacher to tell you that, I think this way is the way we

learn best or "profit from each other". The citations show the importance of peer learning for the development of knowledge acquisition and those students understand the importance of social learning and peer learning as a substitute or complementary to teaching from the lecturer only.

The second theme - ethics in learning. During their learning and following their mutual exposure to the products of their classmates, a kind of internal ethical discourse developed among the students: "You have finished your work ... it's open…, it's inspiring… of course, don't ever steal anything or take anything from anyone else or copy verbatim, ever. No. But I see it as something very instructive ... ". From the quote it can be understood that the student describes the development of a learning culture based on the principles of academic ethics, which are not necessarily applied by the students in all institutions of higher education.

The third theme - humanistic assessment. For example, the student states that watching the video uploaded by the lecturer through BC, as part of the assessment process and feedback on assignments, evoked positive emotions ,in the evaluation process as expressed in her remarks: "It's really feedback when you see his facial expressions .you know if he's laughing or not, you know what needs to be improved. He says hello, it's much more human It's definitely awfully fun to watch, even the lecturer". In her words, the student emphasizes that using the tools available in BC, the lecturer was able to bridge the physical distance created by distance learning and create human closeness.

Discussion

During the period of the COVID-19 pandemic lockdown, education systems and academia underwent an emotional roller coaster and experienced many changes. The use of BC as a tool for student perceptions, has been found to be a platform that invites socio-constructive learning that addresses the limitations of distance learning and learning, by addressing the emotional and social aspects of learning and assessment. According to the students, the BC is able to address emotional and social aspects, which form the basis for SEL, by serving as a platform for sharing learning outcomes. The testimony of students is especially important in teacher-training institutions because the rationale of teacher training is based on creating a model for teaching based on personal predestination that includes interpersonal, such as teacher-student interactions and between the students themselves in a peer-learning format. These are recognized from the literature, as encouraging motivation for learning.

Conclusion

Social learning, ethics in learning and humanistic assessment, the themes found in this study, correspond to the three bases for education. The issue of fairness is compatible with ethics in learning, the basis of humanity is compatible with humanistic assessment and the basis for dialogue is compatible with social learning.
- Ethics in learning is an important issue as students were examined at home during the COVID-19

lockdown. When students are being evaluated while staying at home, they might tend to copy from each other In the case of this study, it appears that the use of BC obviates the need for students to engage in . the subject of copying.

- The lack of human contact during the online teaching period was one of the major issues .T he BC interface enabled the opportunity for an emotional and humanistic relationship between the lecturer and the students.

- It was challenging to overcome the physical distance between the teacher and the pre service teachers, while learning remotely. The ability to create teacher-student and student-student dialogue was compromised. The BC enable dialogue between them.

In conclusion, the findings of this study illustrate that through proper use of BC it is possible to bridge the complexity of teaching and learning during the lockdown and distance learning period as well as to integrate educational foundations based on SEL principles and emphasizing learning ethic values.

Contribution and Limitations

This research has a theoretical and applied contribution. At the theoretical level the research has helped to expand the knowledge regarding distance learning coping in institutions of higher education. In practical terms, the study added knowledge that may aid in understanding how digital tools are used and utilizing their characteristics to increase engagement and motivation for learning among pre-service teachers in institutions of higher education in distance learning. The study has a number of limitations related to the size of the sample based on one institution of higher education as well as the number of interviews conducted.

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Evaluation of the Place of Nature and Environment in Educational Life in Accordance with the Opinions of Teachers

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Abstract: Since the aim of the study is to evaluate the place of nature and the environment in the educational life in detail in accordance with the opinions of teachers, a qualitative case study pattern was used. The study group of the study consists of 40 teachers working in public schools in a province of Turkey during the 2021-2022 academic year. The data of the study were collected by interview method. The interview data were analyzed using content analysis, one of the qualitative data analysis methods. According to these results obtained from the research, the teachers stated that the experiences learned submerged in nature and the environment will increase the students' learning by doing and experiencing the most, develop high-level thinking skills, concretize their learning, increase the adaptation of the students to the society and the social environment, and protect the students from possible negative interactions caused by technology. The results obtained from the research, teachers said that there should be a course in nature and environmental education programs, that the activities in nature and environmental education programs cannot be fully implemented due to seasonal and geographical locations, that teachers neglect or overlook the activities related to nature and environment in the education programs due to the anxiety of preparing the students for the exam, but that flexibility should be provided to the teachers in the application of such subjects in the education programs. Other results obtained from the research, it is possible to say that the activities that teachers recommend as activities related to nature and the environment in their curriculum include learning by doing and experiencing, require practical and practical skills, consist of activities to develop students' problem-solving skills, and encourage cooperative learning.

Keywords: Nature, environment, teacher, educational life

Introduction

Starting from the earliest ages, children can perform much faster and more active learning in an environment where they can see, touch, hear, therefore they can use their senses, wonder, observe and test (Erentay & Erdoğan, 2009). Environments outside the classroom, such as nature and the environment, offer unmissable opportunities for individuals to learn by doing and experiencing. Considering that nature and the environment are indispensable parts of educational environments, which contribute greatly to the development of problem solving and high-level thinking skills in individuals, it is necessary to have an awareness of using formal and non-formal education as an

educational environment at all levels in a much more comprehensive and effective way. When the literature on the subject was examined, studies that examine the awareness that nature and environmental education will bring to students from various angles were also found (Erten, 2012; Stocklmayer & Gilbert, 2003).

There is no doubt that teachers have great duties in transferring and applying this awareness to societies. This study is considered important as it will enable teachers to increase the frequency of use of nature and environment as a direct educational environment like a classroom, it will create awareness about the subject in people and enable the adequacy of the activities related to nature and environment included in the curriculum so far on this matter. In addition, the results of the research are expected to provide findings on what activities can be done by teachers to use nature and the environment directly as part of education and to be a source for education stakeholders and related literature on the subject. The aim of the study is to evaluate the place of nature and environment in educational life in line with the opinions of teachers. For this purpose, the answers to the following questions were sought:

Q.1) How do experiences learned submerged in nature and the environment affect the development of students? Could you explain?

Q.2) Do you find the activities related to nature and environment in the curriculum related to your field sufficient? Could you explain?

Q.3) What kind of activities do you recommend to be included in the educational programs related to nature and the environment as part of the education?

Method

Since the aim of the study is to evaluate the place of nature and the environment in the educational life in detail in accordance with the opinions of teachers, a qualitative case study pattern was used. Qualitative studies provide in-depth information about psychological measurements and social events (Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz, & Demirel, 2010). Case study is a methodological approach that involves an in-depth study of that system using multiple data collection to systematically collect information about how a limited system functions and works (Chmiliar, 2010). Merriam (2013) defines case study as an in-depth description and study of a limited system.

Study Group

The study group of the study consists of 40 teachers working in public schools in a province of Turkey during the 2021-2022 academic year. Easily accessible sampling method, one of the purposive sampling methods, was used to determine the study group. The necessary permits have been obtained from the provincial directorate of national education in order to contact the study group.

Collection and Analysis of Data

The data of the study were collected by interview method. Interviewing is used to learn about behaviors, emotions that cannot be observed directly, or how people describe the world around them (October, 2003; Merriam, 2013). A semi-structured interview form was used as a data collection tool. During the preparation of the semi-structured interview form, expert opinions were consulted and the final form was given in accordance with the opinions and suggestions received from them. Then, face-to-face interviews lasting an average of 15 minutes were conducted with teachers who voluntarily wanted to support the study. In order to ensure the reliability of the study, a confirmatory analysis was conducted by two experts. As a result of the analysis, approval was obtained regarding the consistency and coherence of the relationships between the research data, findings and interpretations. The interview data were analyzed using content analysis, one of the qualitative data analysis methods. The basic process of content analysis is to combine similar data within the framework of certain concepts and themes and to interpret them by arranging them in a way that the reader can understand (Yıldırım & Şimşek, 2011).

Results

Under this heading, in this study, in which teachers' views on the place of nature and environment in educational life are evaluated, the answers given by the teachers to the research questions are presented and interpreted in the form of tables.

Distribution of the opinions of the academicians on the question "Q.1) How do experiences learned submerged in nature and the environment affect the development of students? Could you explain?"

According to Table 1, the teachers stated that they would increase their learning by doing and experiencing the most (f:18) regarding the question of how the experiences learned submerged in nature and the environment affect the cognitive, psychomotor and emotional development of students. Afterwards, the teachers, respectively, stated that the experiences learned submerged in nature and the environment will develop students' high-level thinking skills (f:12), concretize learning (f:8), increase their adaptation to society and the social environment (f:8), and keep students away from possible negative effects that may be caused by technology (f:7). In addition, teachers have stated that nature and the environment will accelerate the psychomotor development of the child (f:5), enrich the child's perspective (f:4), positively affect mental health (f:3) and improve empathy skills in children. According to these results obtained from the research, the teachers stated that the experiences learned submerged in nature and the environment will increase the students' learning by doing and experiencing the most, develop high-level thinking skills, concretize their learning, increase the adaptation of the students to the society and the social environment, and protect the students from possible negative interactions caused by technology. In addition, they stated that the experiences learned submerged in nature and the environment will accelerate the psychomotor development of the students, enrich their perspectives, positively affect their mental health and improve their empathy skills. It is possible to say that the experiences learned in harmony with nature and the environment will

provide more permanent learning for students, support their development processes in every aspect, and keep them away from possible negative situations that may arise from technology in this process.

Table 1. The Distribution of the Answers given by the Teachers to the Question of How the Experiences learned submerged in Nature and the Environment affect the Development of Students

	f
Increases learning by doing and experiencing	18
Develops high-level thinking skills	12
Concretizes learning	8
Improves adaptation to society and the social environment	8
It keeps students away from possible negative effects that may be caused by technology	7
It accelerates their psychomotor development	5
Enriches the child's perspective	4
Positively affects mental health	3
Improves empathy skills	2
Total	**67**

Distribution of teachers' views on the question "Q.2) Do you find the activities related to nature and environment in the curriculum related to your field sufficient? Could you explain?"

According to Table 2, the teachers stated that they did not find the activities included in the nature and environmental education programs sufficient (f:26). They stated that the reasons for this are that there should be a course on its own called nature and environmental activities in education programs. (f: 10), then they could not include such activities sufficiently due to seasonal and geographical conditions (f: 10), they could not include such activities due to preparing students for the exam. (f:5) and teachers should be given flexibility to apply in such matters in education programs (f:3). An important part of the teachers also stated that they found the activities related to nature and environment in the education programs partially sufficient (f:8). As the reasons for this, they stated that they did not practice such activities enough. In addition, some of the teachers participating in the study also stated that they found the activities related to nature and the environment included in the educational programs sufficient (f:6). As the reasons for this, they expressed their opinions as follows: I like nature and the environment very much, so I include such activities as much as I can in my lessons (f:4) and I can include these lessons as much as possible due to my field. (f:2). According to these results obtained from the research, teachers said that there should be a course in nature and environmental education programs, that the activities in nature and environmental education programs cannot be fully implemented due to seasonal and geographical locations, that teachers neglect or overlook the activities related to nature and environment in the education programs due to the anxiety of preparing the students for the exam, but that flexibility should be provided to the teachers in the application of such subjects in the education programs.

Table 2. Distribution of the Answers given by the Teachers to the Question do you find the Activities related to Nature and the Environment in the Education Programs related to your Field Sufficient?

	f
I don't find sufficient	**26**
There should be a course called nature and environmental activities in educational programs	10
Due to seasonal and geographical conditions, I cannot include such activities sufficiently	8
I cannot include such activities as I spend my time preparing students for the exam	5
Teachers should be given flexibility to practice in such subjects in educational programs	3
I find it partially sufficient	**8**
I do not fully implement it	8
I find it sufficient	**6**
Since I love nature and the environment very much, I include them as much as I can	4
Due to my field, I include these lessons as much as possible	2

Distribution of teachers' views on the question "Q.3) "Can you explain what kind of activities you would recommend to be included in education programs about nature and environment as a part of education?"

According to Table 3, teachers stated that as a part of education, tree planting activities can be (f:24) included the most in education programs related to nature and the environment.

Table 3. Distribution of Answers to the Question, "Can you explain what Kind of Activities you would recommend to be included in Nature and Environmental Education Programs as a Part of Education?"

	f
Planting trees	24
Nature walks	15
Environmental cleanliness and regulation	8
Historical and cultural excursions	8
Recycling and zero waste	6
Observing weather forecasts	4
Creating a hobby garden	4
Construction of shelters for stray animals	3
Outdoor book reading activities	3
On-site examination of plant and animal species	2
Camps intertwined with nature can be organized	1
Shadow lengths depending on the time	1
Vegetable and fruit growing activities	1
Tree irrigation activities	1

The teachers stated (respectively, that environmental topics like nature and environmental activities such as nature walks (f:15), environmental cleaning and organization (f:8), historical and cultural trips (f:8) and recycling and zero waste (f:6) could be included in the education programs about nature and environment. In addition, on the same subject, teachers stated that activities such as observing the weather forecasts (f: 4), creating a hobby garden (f: 4), building a shelter for stray animals (f: 3), reading books outdoors (f: 3), examining plant and animal species on the spot (f: 4). f:2), organizing camps in nature (f: 1), shadow lengths according to the time(f: 1), vegetable and fruit growing activities (f: 1) and tree irrigation activities (f: 1) can be included. In line with these results obtained from the research, it is possible to say that the activities that teachers recommend as activities related to nature and the environment in their curriculum include learning by doing and experiencing, require practical and practical skills, consist of activities to develop students' problem-solving skills, and encourage cooperative learning. In accordance with these results obtained from the research, the following recommendations can be included.

- It may be useful to include a course called nature and environmental activities in the educational programs.
- Guidebooks describing the activity practices that teachers can include in their nature and environment related lessons can be prepared and distributed.
- In particular, in order to keep students away from the stress of the exam, more attention can be paid to the implementation of activities related to nature and the environment during the exam years.
- The inclusion of applications that give teachers the opportunity to make flexibility in educational programs for implementing activities related to nature and the environment can make the process richer.

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A Contemporary Problem of Adolescents: Digital Game Addiction

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Abstract: Digital games are tools where individuals from all ages have fun, socialize, and spend time. They have positive effects as well as negative effects. One of the most notable negative effects is addiction. In general terms, digital game addiction is playing games without control. To that end, this study examines adolescents' digital game addictions by their digital game tendencies, gender, and gaming spending. In this direction, the research sample consists of a total of 191 adolescents, 90 female and 101 male. Descriptive statistics and independent samples t-tests were used in the data analysis. When the digital game-playing tendencies of adolescents are analyzed, it is concluded that the games are generally played on the smartphone, are in the battle royale type, and are played for entertainment purposes. Another result collected in the study is that the mean addiction score is statistically significantly higher for males than for females and for those who spend money on games compared to those who do not. The research results were discussed in relation to the studies in the literature, and suggestions were made.

Keywords: Digital game addiction, Digital game, Adolescence

Introduction

Digital games are software that individuals from almost all age groups use primarily for entertainment and spending time (Gentile, 2009). Indeed, 77% of Millennials, 81% of Gen Z, 60% of Gen X, and 42% of Baby Boomers play digital games. While Baby Boomers are the generation that plays digital games at least 2 hours and 30 minutes a week, Gen Z plays the most, engaging in games for 7 hours and 20 minutes a week (Weustink, 2021). Digital games, which have become popular with computers and game consoles, have recently become more common with smartphones and tablets. In this sense, according to the Global Games Market Report, the number of individuals playing digital games has increased regularly (Lindlahr, 2021; Newzoo, 2021).

The interest in mobile games is continuously increasing. It is known that 2.8 billion of approximately 3 billion players played games on mobile devices in 2021 (see Figure 1). It is estimated that this number will reach 3.1 billion by 2024 (Newzoo, 2021). The market share of the gaming industry is also quite high. Global gaming market revenue for 2021 is $178.2 billion, and for 2022, this amount is expected to increase to 196 billion dollars (Gaming Industry Statistics, Trends & Data, 2021).
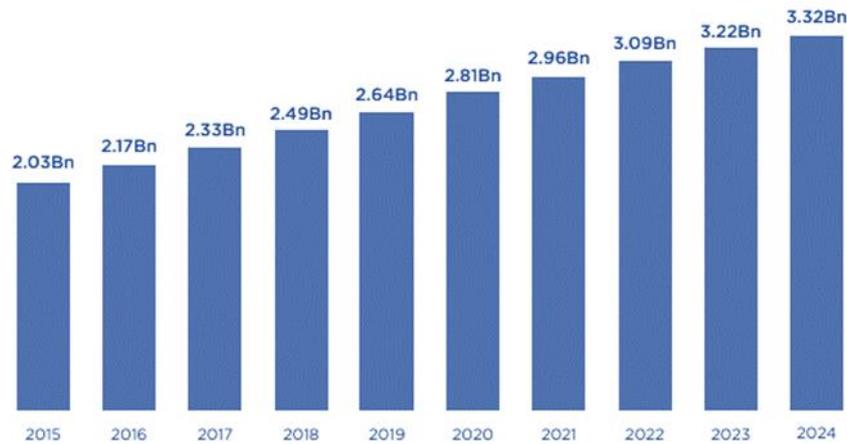
Figure 1. Global Player Forecast 2015-2024 (Newzoo, 2021)

Digital games especially affect children and adolescents (Griffiths, 1998; Homer et al., 2012). Studies show that especially males aged 10-19 have a higher tendency to play games uncontrolled and for a long time compared to females and other age groups (Griffiths et al. 2004; McInroy & Mishna, 2017). When individual factors are taken into account, men are at 2-3 times more risk of addiction than women (Lee et al., 2013). As with almost everything, the uncontrolled use of digital games brings along psychological and biological problems (Griffiths et al., 2011; Wan & Chiou, 2006). One of the most notable of these problems is digital game addiction, which is considered as "Internet Gaming Disorder" by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) of the American Psychiatric Association (American Psychiatric Association, 2013). However, there is no consensus in the literature on digital game addiction (Blaszczynski, 2008; Turner, 2008). According to Horzum (2011), digital game addiction is a situation that has consequences such as not being able to stop playing games for a long time, associating the game with their real-life, disrupting their work due to playing games, and preferring playing games to other activities.

Digital game addiction is a key health problem to be considered. As a matter of fact, some individuals who are trying to prevent access to the game harm themselves and their environment. For example, in 2020, a 16-year-old boy in India died due to playing for days without eating or drinking water (Singh, 2020). In another incident in South Korea, a game-addicted father who spent a long time in an internet cafe left his son at home, causing him to die of hunger (Kelly, 2014). In Taiwan, a person who played games for 3 days without interruption died in a similar way to other events (Hunt & Ng, 2015). The number of similar examples is quite large.

Many studies have been conducted on digital game addiction, which is one of the most important problems of recent years, and its solution (Chiu et al., 2004; Griffiths, 2003; Griffiths et al., 2012; Horzum, 2011). Studies involving students cover different levels of study groups from primary school to higher education (Esposito et al., 2020; Muslu & Aygun, 2020; Wo, 2004). Lately, there has been a steady increase in the time adolescents devote to digital games (Rideout et al., 2010). Determination of digital game addiction in adolescence, which is one of the most important stages of the development of individuals, could guide the measures to be taken. It was

decided to use these variables in the study since there are different results in the literature about the gender of adolescents in game addiction, and there are limited studies examining the situation of gaming spending.

Purpose of the Research

This study aims to examine adolescents' digital game tendencies, gender, and gaming spending in the context of digital game addiction. To this end, it seeks answers to the following sub-problems: What are the tendencies of adolescents to play digital games?

1. Is there a significant relationship between digital game addiction and the gender of adolescents?
2. Is there a significant relationship between adolescents' gaming spending and their game addiction?

Method

This research was carried out in accordance with the survey model, one of the general surveying models (Fraenkel & Wallen, 2009).

Study Sample

The research sample consists of 191 adolescents who were determined by criterion sampling technique and played digital games (Patton, 2014).

Table 1. Demographics of the Study Group

| Grade | Gender | | | | Total | |
| | Female | | Male | | | |
	n	%	n	%	n	%
5	21	40.3	31	59.7	**52**	**27.4**
6	25	55.5	20	44.5	**45**	**23.5**
7	34	48.5	36	51.5	**70**	**36.6**
8	10	41.6	14	58.4	**24**	**12.5**
Total	**90**	**47.1**	**101**	**52.9**	**191**	**100**

Table 1 suggests that 90 of the participants are females (47.1%) and 101 are males (52.9%). When the adolescents are evaluated by grade, 52 of them (27.4%) are in the 5th grade, 45 (23.5%) in the 6th grade, 70 (36.6%) in the 7th grade, and 24 (12.5%) in the 8th grade.

Data Collection Tools

Demographics Form: This form includes demographics such as gender, class level, type of game played, and

gaming spending.

Digital Game Addiction Scale for Children: This scale was developed by Şahin et al. (2019). The Cronbach's alpha value of the scale, which consists of a single factor and six items, is 0.78.

Data Analysis

Descriptive statistical methods and independent samples t-test were used in the data analysis. Parametric methods were used due to the normal distribution of the data. The level of significance was accepted as .05 while analyzing the research data.

Results

In this part, the results of the analysis of the data obtained as a result of the research are given in the sub-headings.

Adolescents' Digital Gaming Trends

Within the scope of the research, adolescents' digital game playing tendencies, game platform, game type, and game playing purpose were examined.

The descriptive statistics of the devices with which adolescents play digital games are given below (see Figure 2).
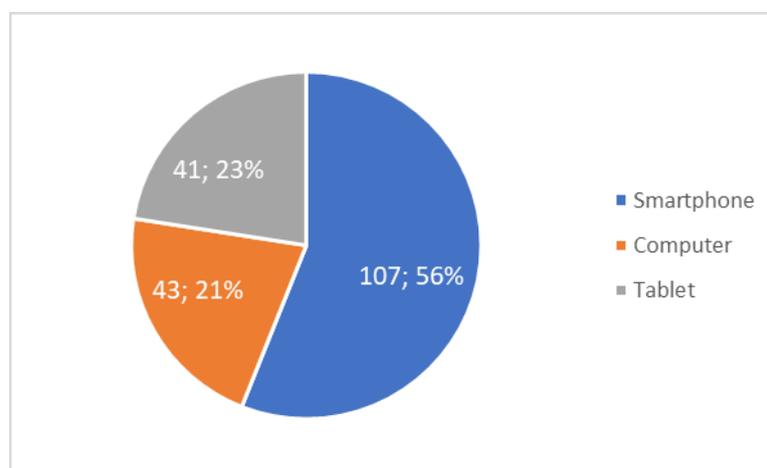

Figure 2. Devices Used for Gaming

The figure indicates that adolescents generally play games with their smartphones (f=107; 56%). Adolescents' use of tablets and computers for games is very close to each other.

Descriptive data for the type of digital game that adolescents play frequently are shown in Figure 3.
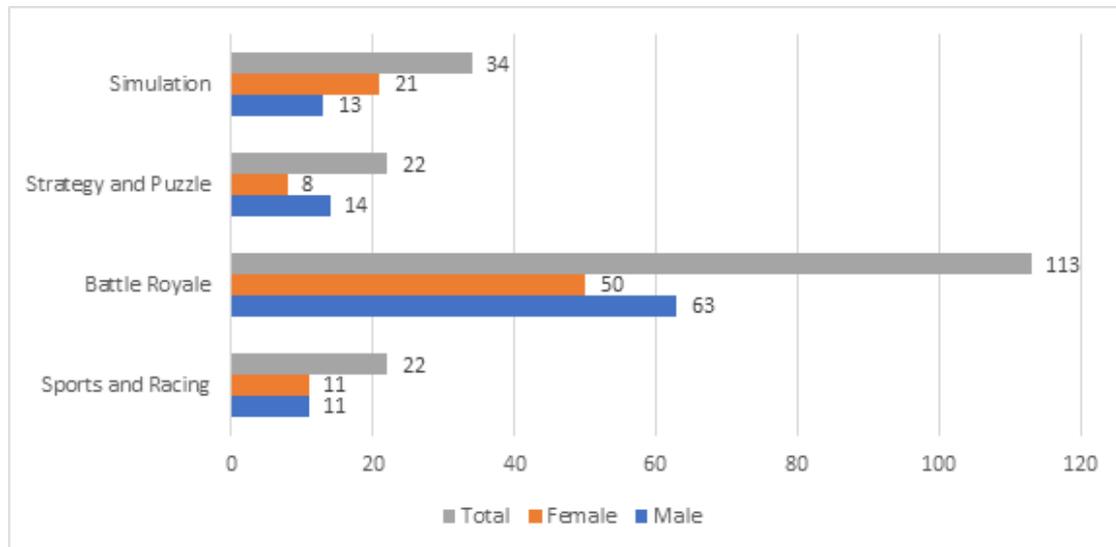

Figure 3. Digital Game Preferences of Adolescents

When Figure 3 is examined, it is seen that the game preferences of males and females are multiplayer battle royale games such as PUBG (f=113).

The descriptive statistical values of adolescents' reasons for playing digital games are shown in Table 2.

Table 2. Adolescents' Purposes for Playing Digital Games

Purposes	Gender				Total	
	Female		Male		f	%
	f	%	f	%		
Entertainment	44	38.9	69	61.1	**113**	**59.1**
No reason	12	75	4	25	**16**	**8.3**
Passing time	29	54.7	24	45.3	**53**	**27.7**
Making friends	5	55.6	4	44.4	**9**	**4.7**
Total	**90**	**47.1**	**101**	**52.9**	**191**	**100**

Adolescents generally use games for entertainment (f=113; 59.1%). The closest game purpose to this was passing time.

Digital Gaming Addiction by Gender and Gaming Spending

Independent samples t-tests were conducted to determine whether there was a significant difference between digital game addiction and spending on games and their genders (see Table 3).

Table 3. t-Test Results of Digital Gaming Addiction Scores by Gender and Gaming Spending

Variables		N	$\bar{X}$	S	sd	t	p
Gender	Female	90	14.80	5.01	189	4.27	.000
	Male	101	18.06	5.45			
Gaming Spending	No	177	16.15	5.29	189	3.41	.001
	Yes	14	21.21	5.96			

Table 3 shows that digital game addictions of adolescents show a significant difference by gender ($t_{(189)}$=4.27, p<.05). According to this finding, the addiction scores of males ($\bar{X}$=18.06) are significantly higher than those of females ($\bar{X}$=14.8). On the other hand, the mean addiction scores of adolescents who spend money on games are significantly higher than those who do not ($t_{(189)}$=3.41, p<.05).

Discussion and Conclusion

This study aims to investigate adolescents' game playing tendencies and digital game addictions by various variables. In this direction, the study concludes that adolescents generally prefer smartphones for digital games. This can be explained by the fact that mobile games appeal to large masses and are a device that can be reached by almost everyone today. Besides, it is known that 2.8 billion of the 3 billion players in the world are mobile players in 2021 (Newzoo, 2020). Hence, this situation can be explained by the portability and the fact that smartphones are at a level that can do many things that a computer can do today, which is supported by studies in the literature (Aktaş & Bostancı Daştan, 2021; Taylan et al., 2018).

The type of game adolescents frequently play has been battle royale games for females and males. This result differs from many studies in the literature (Greenberg et al., 2010; Homer et al., 2012). This difference can be explained by the emergence of new game genres, the development of technology and the game industry. It is thought that these types of games step forward because of the challenge, socialization, and the desire of people to be accepted by their peers. In the literature, studies infer that the types of games played are educational games (Talan & Kalınkara, 2020), puzzle and intelligence games (Homer et al., 2012), strategy and sports/racing games (Greenberg et al., 2010), and action, adventure and war games (Korkmaz & Korkmaz, 2019). When the purposes of playing games are examined, it is seen that most of the answers given are entertainment. This result is similar to the study conducted by Korkmaz & Korkmaz (2019). As the age variable grows, it is seen that the preferences differ (Brooks et al., 2016; Homer et al., 2012).

As a result of the research, it was concluded that gender has a significant effect on digital game addiction. The study results highlight that the mean addiction scores of males are higher than females. This can be expressed by the fact that game designers usually develop games by targeting males. In the literature, there are studies supporting this result (Bonannoa & Kommers, 2005; McInroy & Mishna, 2017; Li & Wang, 2013; Turner et al., 2012), as well as many studies that found no significance (Jang et al., 2008; Kim et al., 2008). However, recent

studies show that females' interest in games increases (Brooks et al., 2011), and the gender gap is closed (Homer et al., 2012).

The market share of the digital game industry is growing every year (Newzoo, 2021). Especially with the development of the game industry, one-time fees for games have become permanent to provide in-game privileges. This has caused individuals to allocate more budgets for games compared to previous years. This study found that adolescents who spend money on digital games show game addiction significantly compared to those who do not, which is an expected result. However, it is noteworthy that the number of people who spend money on the game is quite low. Talan and Kalınkara (2020) concluded that approximately 82% of the participants did not allocate a budget for the games in their study with secondary school students.

In line with the results collected in the research, the following suggestions can be made: Considering that digital game addiction has important effects on adolescents, the number of studies with different methods and techniques in this direction can be increased. Awareness can be created by organizing various programs and activities to prevent digital game addiction.

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Effects of Multimodal Representations on Students' Science Learning

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Abstract: Multimodal representations play crucial role in students' learning process that students communicate their ideas by using representations. The main aim of this research is to determine the effects of multimodal representations on students' science learning. Quasi-experimental with pre-test and post-test design was used in this study. This study was conducted with total of 35 students that were 7th graders of a public middle school located in Istanbul province in Turkey. Experimental group (n=19) was taught science lessons according to multimodal representations. They performed writing tasks by using multimodal representations. Control group (n=16) was taught science lessons according to National Ministry of Education's existing program. The data was gathered by Science Achievement Test that was used as a pre-test and post-test. Results of the study indicated that there is a meaningful difference between pretests and posttests of science achievement test scores in both experimental and control group. Thus, findings supported that teaching science to students with multimodal representations contributed to their science learning.

Keywords: Multimodal representations, Science learning, Academic success

Introduction

Communication is important in our lives to transfer our ideas and we use language for this aim. In science education, language has a crucial role on the grounds that students communicate their ideas by the help of language elements and this process contributes to their science learning. Students transform their science understandings, they gain in science activities, to new meanings by using verbal, visual and mathematical modes during construction process (AL-salahat, 2022; Doruk, 2019; Hand et al., 2015; Kula Unver & Bukova Guzel, E. 2019; Kutbay & Akpinar 2020; Mainali, 2021; Nurnberger-Haag, Scheuermann, & McTeer, 2021; Ulusoy & Argun, 2019; Utomo & Syarifah, 2021; Yilmaz, Durmus, & Yaman, 2018). At this point the importance of multimodal representations arises.

During the social construction process of scientific knowledge text and verbalization are constituent elements

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(National Research Council, NRC, 1996). In mathematical competence and core competences in science/technology, one of eight competencies of Turkey Qualifications Framework, students are expected to integrate various modes while presenting their thoughts (MEB, 2018). According to Next Generation Science Standards (National Research Council, 2013) developing and using models is significant to improve nature of science knowledge.

Students are successful at understanding the knowledge by creating (constructing) their own representations. This construction process contributes to their understanding (Ainsworth, 2006). Students' construction of their own texts demonstrate their cognitive process (Jewitt et al., 2001). In this study, the effects of multimodal representations on students' science learning was investigated by using multimodal representations in science lessons of experimental group. The importance of the study is that it reveals the effect of using multimodal representations as a teaching method on seventh grade students in a public school that is in a low socio-economic region.

Method

Research Design

In this study, quasi-experimental design with pretest and posttest was used to determine the effects of multimodal representations on middle school students' science learning. Science achievement test is used as pretest and posttest.

Participants

Participants of this study were 35 students from a middle school in Istanbul province in Turkey that were seventh graders. Experimental group includes 19 students and control group includes 16 students.

Instruments

The data was collected through Science Achievement Test that is developed by Toprak (2021). Test includes 34 multiple choice items. Kuder-Richardson 20 (KR-20) coefficient of the test was measured as 0,848 by the developer. Correct answers were given 1 point, others were given 0 point. Thus maximum score is 34 points and minimum score is 0 in this test.

Procedure

This study was conducted with 7th grade students through 7 weeks. Teaching method was different in groups. In experimental group multimodal representations teaching method was implemented. Representations were introduced to students with introductory activities and lessons were instructed with the integration of

multimodal representations. In control group, recommended teaching method by National Ministry of Education was implemented.

Data Analysis

The quantitative data, collected through science achievement test, was analyzed through statistical tests. To determine the difference between pretest and posttest in experimental group Wilcoxon Signed Rank Test was used, in control group Paired t test was used.

Results

Results of the data collected through Science Achievement Test are given in this part. Pretest of experimental group did not meet with parametric test conditions by regarding Shapiro-Wilk test. Since experimental group's pretest scores' distributions did not similar, to compare the difference between pretest and posttest scores of experimental group Wilcoxon Signed Rank Test was used.

Table 1. Wilcoxon Signed Rank Test Results of Experimental Group

	N	Median	Z	p
Pretest	19	13,00	153.000	0.000
Posttest	19	24,00		

The results of experimental group's Wilcoxon Signed Rank Test is given in Table 1. This result indicated that there is a significant difference between pretest and posttest of experimental group (Z=153.000, p=.000). Posttest scores (Median=24) is higher than pretest scores (Median=13). According to this result, multimodal representation teaching method has an effect on students' test scores.

Table 2. Paired t Test Results of Control Group

	N	$\bar{X}$	Ss	sd	t	p
Pretest	16	10,00	3,31	15	-2.887	0.011
Posttest	16	13,81	6,47			

Control group's scores matched with parametric test conditions so paired t test was used to determine the differences between pretest and posttest. In Table 2, Paired t Test results of control group is given. According to the results, there is a significant difference between the pretest and posttest of control group (t=-2.887, p<0.05). This result indicates that existing teaching method has an effect on students' test scores.

Conclusion

Multimodal representations contribute to students' learning process on the grounds that using different modes in a lesson triggers cognitive processes that result in learning. From the results of the difference between pretest and posttest of experimental group, it can be said that teaching with multimodal representations has an effect on students' science learning. Results of the research point out that there is a significant difference between pretests and posttests of science achievement test scores in both experimental and control group.

Findings indicate that multimodal representation teaching method and existing teaching method that National Ministry of Education recommend both contribute to students' science learning. Thus, multimodal representation teaching method could be used as an alternative to the existing teaching method in science lessons to promote learning in middle school level.

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Seeing Deeply from the Bottom of the Heap: Persistent Resistance and Resistant Persistence in African–American Feminisms

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Abstract: In discussing the nuances and multiplicities of Black feminisms, this paper centers on the shared experiences that shaped and developed Black feminisms in the United States. Moreover, I explicate the ways in which Black American women, including women involved in Black feminist movements, navigate and defy multiple oppressions and deconstruct the racist and sexist ideologies that devalue their humanity. I follow the following single line of argument: the roles of agency and resistance in the development and persistence of African–American feminisms. In this review of African–American feminisms, I will, therefore, examine the importance of intersectionality for Black feminisms' strengths in opposing overlapping forms of discrimination based on gender, race, social class, sexual orientation, and disability. Being Black in America means enduring White supremacy and thriving despite pervasive obstacles. Being a Black woman often means acting as the backbone of America despite maltreatment. Black feminisms and Black feminists transform societies via intellectual and pragmatic approaches to social problems. I argue that the practices that speak of and act upon conditions both inside and outside the academy are not primarily examples of individual herioism. They are forces, figures, and concepts bound up with endurance, survival, defiance, resistance, creation, and flourishment.

Keywords: African–American feminisms, Gender stereotypes, Transforming societies

Introduction

Black feminism is rooted in the lived experiences of Black women. Rather than having one specific definition, Black feminists insist that there are "Black feminisms." In this paper, I articulate the interplay of theoretical and practical considerations in the emergence of Black feminist perspectives and activist movements in the U.S. from slavery and abolition to the present day. Rather than perceiving Black feminism as a singular amorphous movement, I trace the development of disparate branches of Black feminism, including abolitionist feminism, civil rights activism, womanism, queer Black feminism, and Black feminist criticism of the Black Lives Matter movement. Despite differences between Black feminist movements, scholars of African–American women's history often identify recurring themes, including intersectionality (of race, gender, and class), conflicts between Black men and White women, solidarity with African–American men, histories of confronting Black men about sexism, ambivalence toward White feminists and feminism, proving their wisdom, combating stereotypes

(particularly negative sexual ones), reclaiming sexual autonomy and increasing economic independence, brokering solidarity and creating networks, advancing the importance of motherhood, uplifting traditions, and presenting viable alternatives to White traditions of womanhood. In discussing the nuances and multiplicities of Black feminisms, this paper centers on the shared experiences that shaped and developed Black feminisms in the U.S. and the roles that agency and resistance play in the persistence of African–American feminisms today to transform societies via intellectual and pragmatic approaches to social problems.

Black feminism is an intellectual, artistic, philosophical, and activist practice grounded in Black women's lived experiences with a broad scope that makes definition difficult. Consequently, many Black feminists opine that it is more accurate to think of "Black feminisms" in the plural form. Noted activist and scholar Angela Davis concurs and speaks to this at an oral history interview archived at the Smithsonian Museum: *"I rarely talk about feminism in the singular. I talk about feminisms. And, even when I myself refused to identify with feminism, I realized that it was a certain kind of feminism … It was a feminism of those women who weren't really concerned with equality for all women."* This paper discusses perspectives of African–American feminist thoughts. While not an exhaustive review of these expressions in their various incarnations, including male and female expressions, the paper discusses shared experiences that help shape and develop this distinct brand of U.S. feminism. This essay is also concerned with the ways Black American females manage and challenge multiple oppressions and deconstruct racist and sexist ideologies that devalue their humanity. This brand of feminism is charged with transforming societies through intellectual and pragmatic approaches. As historian Darlene Clark Hine observes, African–American women demonstrate "a special brand of female militancy" (p. 12). Universalism is also largely challenged by Black feminism–"was not it born out of the contestation of white feminism that, supposedly speaking of all women, repressed Black specificity under this "all?" (Dorlin 2007). I intend to reflect on the process of the development and persistence of African–American feminisms by following a single strand of argument, that is, the role of resistance and agency. This review of African–American feminisms will therefore, examine Black feminism through the lens of social and political dynamics at work in the USA, which stands in opposition to the fake universality promoted by the mainstream feminist movement, and proclaim an intersectional struggle against discrimination based on gender, race, and social class, which are components far removed from the mainstream model.

Method

In this study, Black feminist epistemological viewpoints are used and analyzed in the methodological approach to further the dialogue on Black feminist theory. The idea is to bring together a collection of views on what "African–American feminism" is about and its principal claims, to incorporate a larger audience into this experience and understand how their perspectives could be interpreted. The author is aware that not all possible issues surrounding the interrogation of "African–American feminisms" discourse are covered here, and acknowledges several omissions–for example, situating this discussion within the framework of conversations on African and Africana (Diasporan) Feminism. By grounding this analysis in the Black feminist methodology,

the author does not claim to encompass ALL Black feminists, but rather those situated within the continental USA. The dialogue is a virtue in and of itself, and while an extensive discussion of feminism is presented, Black feminism, womanism, and their differences are beyond the scope of this article. I hope to add to the growing body of knowledge that supports the use of Black feminist approaches while striving to understand the views of different groups of Black women.

Results

Feminism is treated both as a social movement opposed to sexism and a critical theory that emphasizes the role of patriarchy in diminishing women's lives for purposes of this discussion. The term "feminism" denotes the most generic level of this perspective. Black feminism is an anti-sexist perspective rooted in African–American women's distinct history of activism. It focuses on multiple and interlocking oppressions and identities that constitute humans' experiences as oppressors or members of the oppressed class. Womanism is a vernacular that provides a relatively anti-oppressive perspective devised and espoused by African Americans and other women of color. It partially overlaps with Black feminism but contains elements distinctive from either Black or White feminism and is more broadly conceived. Some Black feminists consider themselves womanists, while others do not, and vice versa. Despite the various nomenclatures, there is a common historical and experiential thread that all African–American women share as "everyday women," that differentiates them outside or beyond those social roles and statuses. The specific dimensions of Black feminist epistemology as defined by Collins (1990) are as follows: lived experience creates wisdom for survival; new knowledge claims are created through dialogue with the community's members; thus, "connectedness is a primary way of knowing"; there is an "ethic of caring"; thus, "ideas cannot be divorced from the individuals who create and share them," and "personal expressiveness, emotions, and empathy are central to the knowledge validation process"; there is an "ethic of personal accountability"; hence, knowledge claims from a moral and ethical person are more highly valued than from those whose ethics are suspected or unknown. Collins notes that the traditional Black church services "illustrate the interactive nature of all four dimensions of this alternate epistemology" (p.). These dimensions, when politicized and attached to a social justice project, are the "framework for Black feminist thought and practice" (Collins 1990, 260-266).

Scholars of African–American women's history have consistently identified themes that defined these women's experiences and perspectives over time. Some of these themes include the intersection of race, gender, and class; their symbolic linchpin of conflicts between Black men and White women; solidarity with African–American men, particularly expressed through support for Black nationalism and militancy; history of confronting Black men about sexism; relational tensions between men; ambivalence about feminism and White feminists; fighting stereotypes, especially negative sexual stereotypes; reclaiming sexual autonomy and self-determination; economic independence and general self-reliance; solidarity, networks, and sisterhood; the uplift tradition; representatives of an alternative tradition of womanhood (in contrast to White traditions, particularly the "cult of true womanhood"); the importance of motherhood; divisions among other African–American women based on

vectors of difference other than race and gender (such as color, class, sexuality, nationality, religion, education, or ideology); and their key to the future of the race or humanity (Gumbs 2018).

While this article does not reiterate the Black feminist epistemological standpoint approach in great depth (see Collins), it is important to note the following principles that underpin this theory: (1) Black feminist thought acknowledges that "as a collectivity, U.S. Black women participate in a dialectical relationship linking oppression and activism"; (2) there is a tension between ideas and experience; thus, "wisdom" gained from experience is highly valued; (3) action and thought inform one another in ongoing dialogue; (4) essential contributions to Black feminist theory have come from Black women intellectuals from all walks of life (not just academia); (5) Black feminist thought and social justice projects are "dynamic" and intimately connected; and (6) "Black women's struggles are part of the wider struggle for human dignity, empowerment, and social justice" (Collins 1990, 23-42). To be Black in America means to endure the manifestations of White supremacy and to thrive notwithstanding relentless barriers. To be Black and a woman often means standing firm as the backbone of America, despite mistreatment.

Discussion

Thirty-two years ago, Kimberlé Crenshaw coined the term "intersectionality" to explain systemic inequalities that perpetuate Black women's oppression in American history. Today, Black women are at another critical juncture as they continue to experience inequities in areas, such as healthcare, the justice system, and the workplace. For Black girls, the situation is equally bleak. Studies have shown that "Black boys are more likely than their White peers to be misperceived as older, viewed as guilty of suspected crimes, and face police violence if accused of a crime" beginning at age 10 and are afforded less innocent than their White counterparts. Correspondingly, Black girls are viewed as less innocent and more adult-like compared to White girls of the same age, especially in the 5–14 age range. Ocen notes, "Black girls bear the brunt of a double bind: viewed as more adult than their White peers, they may be more likely to be disciplined for their actions, and yet they are also more vulnerable to the discretionary authority of teachers and law enforcement than their adult counterparts." She continues, "[L]iminal children … are viewed as dependent, limited rights-bearing subjects while at the same time imbued with adult characteristics such as sexual maturity, individual agency, and criminal responsibility. Thus, they are directed into rather than out of the juvenile justice system." "Only by recognizing the phenomenon of adultification can we overcome the perception that "[i]nnocence, like freedom, is a privilege."

In her essay, "Eating the Other: Desire and Resistance" (from *Black Looks: Race and Representation*), Bell Hooks speaks of the devaluing of humanist bonds that is remarkably prevalent in shallow American consumerist culture. She, like others, with an eye for racial capitalism and its effects on violence and health, channels the rage, resilience, and response to the "commodification of otherness" into an anti-racist intervention that declines to treat race in isolation or produce analogies that remain too abstract to have any purchase on the world. In its

neoliberal model, capitalism is responsible for the "*Becoming Black of the World*," as Cameroonian philosopher Achille Mbembe puts it. Only the obscenely wealthy are spared from blackening—from instrumentalization and animalization under a capitalist logic that bestows luxury to the one percent and dishes out misery to the rest, producing a never-ending stock of new slaves. It is in this sense that this paper examines the contributions of African–American feminists who critique and examine the incommensurability of racial subjugations and the intersection of race with other interlocking forms of oppression that should be included in the discussion on American feminism writ large.

An important theme addressed by African–American feminists was the difference between education and intelligence. Collins highlights a similar distinction in her work, noting the difference between "knowledge and wisdom." She states that experience is "the cutting edge" separating these terms and is the foundation for wisdom, "the key to Black women's survival" (Collins 1990, 259). Gumbs (2018) speaks of intelligence in a manner analogous to Collins' "wisdom"; thus, intelligence is intimately related to experience rather than education. Collins notes that in the African–American community, many Black women intellectuals may or may not have been highly educated. Sojourner Truth could not read or write but was a formidable intellectual who deconstructed the word woman in her famous "Aint I a woman?" speech at the National Convention on the Rights of Women in 1851 in Worcester, Massachusetts. Hence, in contrast to the dominant society that equates education and intelligence, for African Americans, "the connection between experience and consciousness shapes the everyday lives of individual African–American women" (Collins 1990, 24). This viewpoint evolves from "the outsider-within stance" and the "embeddedness" in African–American culture. As African–American feminism began to take shape in the USA in the 1960s and 1970s, activists like Angela Davis, Alice Walker, and Audre Lorde were already talking about the need for a specific stream to give voice to women who were living outside the pattern of "White, western, middle-class women."

In the 1980s, Bell Hooks popularized the term "intersectionality," naming the double oppression that emerged from being female, Black, and, in many cases, poor. For nearly 200 years, Black women in the USA suffered extreme and unimaginable cruelty under a legalized system of human slavery. The feminism that emerged out of this horrific indignity was and continues to be politically radical, candidly intellectual, and deeply spiritual. Many traditional Black sayings, repeated often in the church, addressed this belief. A visiting preacher said, "up here will fool you (pointing to his head), in here will school you" (pointing to his heart). Another preacher quoted Rosetta Carr, "You can go to college, you can go to school. But if you haven't got religion, you an educated fool" (p. 33). Collins pointed out that life as a Black woman required wisdom for survival, and Black people frequently mocked "educated fools" who had "book learning" but did not possess "mother wit" (Abrums 2000, 89-105). This emphasis on the connection between intelligence (or wisdom) and experience, rather than education, exposes the contradictions contained in the dominant view. Both the institutional and individual racism reinforced by societal stereotypes perpetuated about African Americans remains a prevailing force in the USA today, a society in which racial discrimination is illegal but prevalent. Collins (1990) supports this, noting that Black women, working as slaves and domestic servants in the homes of whites, developed a "curious

outsider-within social location, a peculiar marginality that stimulated a distinctive Black women's perspective. … As outsiders, [they] often developed distinct views of the contradictions between the dominant group's actions and ideology" (p. 11). Martin (1987) finds that Black working-class women suffer from the "triple jeopardy of race, class, and gender," seem to come closer to achieving a critical stance about their healthcare than do women in other groups (p. l93). She states, "those at the bottom of the heap tend to see more deeply and the nature of the oppressions exacted at the top of the heap" (p. 202). Harding (1998) points out that marginalized groups often ask critical questions about their own lives, as well as "the social institutions designed to serve 'humanity'" (p. 152).

It is important to understand that when individuals or groups recognize objectifying processes, such as discriminatory practices, there is a powerful subjectivity in the recognition itself. As Pratt (1986) states, "Subjective experience is spoken from a moving position already within or down in the middle of things, looking and being looked at, talking and being talked at" (p. 32) According to Jaggar (1988), there may even be a decided advantage to being on the margins when striving to understand systems of power. She notes that "many members of the ruling class are likely to be convinced by their own ideology …. Oppressed groups, by contrast, suffer directly from the system that oppresses them. Their pain provides them with a motivation for finding out what is wrong." (p.). Women express awareness of their position in the social structure and demonstrate opposition to oppression in many different ways. Collins (1990) describes the multiple strategies of resistance that Black women employ to negate "other-imposed" images and stereotypes. These resistances are found in literature, music, the arts, and in African–American churches, organizations, and fields of labor. They can also be found in "the private personal space of an individual woman's consciousness" (p. 118). Even if, on the outside, the woman seemingly remains "motionless," she may maintain or create "a sphere of freedom" on the inside (p. 118). This independent space of consciousness enables the woman to not merely exist, but to take control over her own experience, employing agency/resistance in various ways.

One of the ways Black women sustain this sphere of consciousness is through the creation of "their own ideas about the meaning of Black womanhood" (Collins 1990, 10). This self-definition helps them to resist colonizing images and maintain subjectivity in everyday encounters with the dominant White society. The term womanist is related to this self-definition and is defined as follows: "From womanish … A black feminist or feminist of color … outrageous, audacious, courageous or willful behavior. Wanting to know more and in greater depth than is considered good for one … Responsible. In charge. Serious" (Grant 1989, xi). One is defined as womanist when one is "committed to the survival and wholeness of entire people" regardless of race or gender. Collins (1990) sees that Black philosophies of activism, of resistance against oppressive institutions, can be found in alternative locations, i.e., within the ideas shared "with one another as mothers in extended families, as other mothers in Black communities, as members of Black churches, and as teachers to the Black communities' children"(p. 17). Grant (1989) notes that the term womanist is an apt description for Black women's activism within the African–American church and Black women's intellectual tradition, i.e., for Black women's Christian theology. Grant demonstrates that Black women's intellectual tradition within the church has always

incorporated resistance. In Layli Phillip's (2006) edited opus she features Delores S. Williams's article on "Womanist Theology," which presents a template for womanist thoughts. Black women have traditionally employed a hermeneutical critique of the Bible, as seen in the story of the slave woman who promised herself that when she learned to read, she would refuse to read the part in the Bible that supported slavery.

Countless Black women and men were born and died as slaves for more than 200 years and multiple generations. Under the U.S. law, enslaved Black women were not even considered fully human; they had no rights for themselves, nor their children, who were the legal property of their owners. Slave women were constantly under threat from anyone who might have access to them. These terrible conditions inspired freed feminists, such as Harriet Tubman and Sojourner Truth, to speak out publicly and file a petition for abolition and women's rights. These conditions also inspired great rebellion. Under slavery, Black women were not recognized as citizens; they were effectively people without a nation or statehood. They had no legal rights or protection under the law. As such, they were perpetually vulnerable and victims of the most egregious assaults—physical, emotional, psychological, and sexual. Alongside men, they labored under arduous conditions as field hands and coal miners, in iron foundries, and as lumberjacks and ditch diggers, as well as domestics (see Davis 1981, 3-10). Unlike indentured servitude, slavery for the most part was usually a permanent status from birth to death. Black women in the USA fought ardently to resist the cruelty and ignominy of slavery. Women's resistance efforts varied from mild or passive to extreme and active. Passive resistance included behaviors like working at a slow pace or intentionally breaking tools to manage their work hours. A tragic but instructive example of extreme Black female resistance to slavery is illustrated in the Margaret Garner story, which was popularized by Toni Morrison's (1987) celebrated fictional book and Oprah Winfrey's film, *Beloved*. Garner, a mulatto slave woman from Kentucky, escaped slavery with her husband and four children (some of whom are believed to be fathered by her slave owner) to Cincinnati, Ohio during the winter of 1856. When found and recaptured by her slave master, she took the life of her youngest child by brutally slitting her throat to the point of decapitation. She also, unsuccessfully, attempted to kill the remaining three children. The slaughter of this child illustrates the harsh cruelty of slavery, as well as the endearing magnitude of a mother's love and ultimate act of protection. Other instances of resistance can be found in nonfiction slave books or slave narratives, e.g., *When I Was a Slave: Memoirs from the Slave Narrative Collection*, edited by Norman R. Yetman or Annie L. Burton's *Women's Slave Narratives*.

Feminist scholar Bell Hooks (1981, 29) situates White men's patriarchal ideologies and practices within early Christian religious teachings, which maintain that women were the embodiment of original sin, inherently wicked "creatures of the flesh," and "evil sexual temptresses" who allure men into adultery by exploiting their weaknesses. These guiding principles inspired the famous American witch hunts of the 17th and 18th centuries. By the 19th century, however, there was an important shift in how women were portrayed. Now noble, pure, and virtuous, the Victorian age ushered in not only great national wealth thanks to industrialization but also a sterile, desexualized image of womanhood. While White women were idealized in a puritanical fashion, Black slave women continued to endure brutal sexual assaults and were degraded by White men. Hooks (1981) posits that

racism alone was not the cause of violence against Black women; indisputably, the interactions among sex, race, and class explain the extent to which Black women were and still are devalued in American society. The devaluation of Black women is situated within controlling images imposed by White patriarchal racism (see Roberts 1997; Collins 1990; Hooks 1981). These controlling images—the mammy, the wanting and always available Jezebel, breeder woman, lazy welfare queen, and domineering matriarch—justify the oppression of Black women while denying their humanity and rationalizing White supremacy (Roberts 1997; Collins 1990). Taylor, adopting Collins' work, explores how images of Black women as "the mammy and the matriarch, welfare mother/queen and Jezebel, and Black lady overachiever" (Taylor 1999, 34–38; 1990, 72–84) have marginalized and controlled Black women in the healthcare arena. As a result, U.S. Black feminists emphasize the need for and essentiality of self-definition. Deconstructing ugly stereotypes of Black women is a principal and distinguishing feature of Black feminist thought and praxis (see Collins 1990).

The deviant portrayal of Black women also helped fuel the late-19th-century eugenics movement, which sought to restrict and control Black women's reproduction. During the postslavery and reconstruction eras, public anxiety grew about race-mixing between Blacks and Whites and excessive fertility among the poor and Black populations, who were essentially deemed "unfit," "morally corrupt," and "naturally inferior." Eugenicists, whose philosophies were informed by late-19th-century race science, believed that these inferior traits were biological and were hugely successful at getting several states to sanction sterilization laws. During the 1930s depression era, Aid to Dependent Children (ADC) was established to help the "deserving poor," namely widowed women with children. By the 1950s and 1960s, at the peak of the contraceptive revolution, single Black motherhood was on the increase along with their dependence on state-sponsored welfare programs. The unsavory correlations between single motherhood and poverty caused some state legislators (Daniel Moynihan was an infamous example) to examine the cause of the Black family's downward moral decline. To a great extent, authorities concluded that Black women were to be blamed for being domineering matriarchs who emasculated their men. Further, the depiction of poor, Black welfare mothers as both licentious and lazy helped solidify anti-aid sentiments in the late 1960s, which gave rise to the National Welfare Rights Organization (NWRO), a movement composed mostly of Black women.

Three interdependent dimensions of Black women's oppression are posited to be political, economic, and ideological (Collins 1990). Historically, the political dimension denied Black women the right to an education and to fully participate in American democracy as voters as well as public officials. In addition, politics denied Black women's equal treatment and protection under the law. The second dimension of Black women's oppression is economic. Most U.S. Black women continue to labor in subordinate service roles at exploitable wages, which undermine their ability to advance financially. The third dimension of oppression is the control of images of Black women to rationalize White supremacy. In the U.S., young Black mothers are portrayed as sexually irresponsible and blamed for passing on deviant lifestyles that ultimately give way to generational poverty, delinquency, and despair (Roberts 1997). Sometimes, these three dimensions of oppression intersect— the political, economic, and ideological—as in the case of welfare reform. As Thomas (1998) outlines, since the

1970s several legislative efforts encourage Black welfare mothers to self-select reproductive sterilization via contraceptives for payment. One of the most notable was Wayne Bryant's "Child disincentive program" (New Jersey) and Kerry Patrick's bill that offered free Norplant contraceptive implants with a $500 incentive (Kansas). Similarly, Louisiana's David Duke, a former grand wizard of the Ku Klux Klan and a state representative, sponsored a 1990s initiative to pay welfare recipients $100 annually for Norplant implants. Thomas (1998) maintains that by 1995, 70 bills in 35 states were initiated to provide contraceptives, namely Norplant, to welfare recipients for pay reminiscent of earlier eugenics ideals. As noted earlier, religious beliefs offer oppositional ways of thinking to survive dominant systems, such as the healthcare system for many Black women. The stories about how "education" does not necessarily equate to "intelligence" supported women's knowledge that, in their experience, there were concepts related to healing that were more critical than those held by the western biomedical and educational system.

African–American women struggle with "naming" their feminism. In the 1980s, novelist Alice Walker introduced the term "Womanist" as an alternative to feminism. Collins (2001) notes that Walker's *In Search of Our Mother's Gardens* provides four contradictory definitions of "womanist" (p. 10). The first definition equates womanism with "Black" feminism. Assumedly, the intent behind this use was to demonstrate the peculiarities of the lived experiences of Black women who are forced to shoulder multiple oppressions simultaneously every day. The second definition of womanist portrays Black women as superior to White women in the metaphor, "womanist is to feminist as purple is to lavender." Collins (2001) maintains this use of womanism situates womanism in Black Nationalist rhetoric. In doing so, it allows Black women with high racial identity salience to align themselves with women's issues without attacking Black men. Simultaneously, it is an opportunity for them to reject White women's feminism and its limitations. The third definition of womanism states that it is "committed to survival and wholeness of entire people, male and female" (Collins 2001, 11). This, in many respects, reflects the Africanist vision discussed earlier that women and men are complementary figures and not in competition with each other. Collins (2001) maintains that this definition of feminism nurtures relations between Black women and Black men. The fourth definition of womanism evokes sexuality and openness to the different forms it takes. Here Walker states that a womanist is "a woman who loves other women, sexually and/or nonsexually" (p. #). Collins (2001) explains that this was perhaps the most controversial definition of womanism, especially for the African–American community, which had yet acknowledged its homophobia. Sexuality, alongside race and citizenry, is explicitly a part of the "third wave" feminist agenda, which was ironically first articulated by Rebecca Walker, Alice Walker's daughter, in a 1992 *Ms. Magazine* article entitled "Becoming the Third Wave." Black women and feminists have long acknowledged that they endure a "double bind" or a "double jeopardy," or, as Anna Cooper stated in 1893, they are "doubly enslaved." This sentiment was most famously articulated in the mid-19th century by Sojourner Truth, who said, "There is a great stir about colored men getting their rights, but not a word about the colored woman; and if colored men get their rights, and not colored women theirs, you see the colored men will be the masters over the women, and it will be just as bad as it was before" (see Hooks 1981, 4). Publicly calling out Black men's patriarchy has always been tricky. As Cole and Guy-Sheftall (2003) note, in the Black community

there exists a kind of gentlemen's agreement between Black men and Black women that any differences they might have with each other should be resolved behind closed doors. Black women who publicly express discontent with Black men's patriarchy violate this custom and are characterized as being disloyal or "race traitors." The 1991 Anita Hill Testimony was a good representation of this circumstance (see Cole and Guy-Sheftall 2003; Gay and Tate 1998).

As illustrated, while there is diversity in the expression of Black feminisms, there are also indisputable commonalities. These represent a set of core themes that weave across expressions in the USA, creating a patchwork quilt of shared experiences that are uniquely and distinctly African–American feminism. Advocates and adherents all struggle for self-definition and visibility, and against patriarchy and economic oppression. Likewise, in the USA, there is a long history of women's resistance to multiple oppressions in the form of race, sex, class, and sexuality. These oppressions intersect in the ways women labor in this region, which, according to Collins (1990), is an essential starting point of Black feminist analysis. Finally, the burgeoning literature on masculinity in African–American feminist studies and "Black male feminism" (see Sexton 2018; Neal 2015; Lemelle 2010; Lemons 2008; White 2008, 2006a, 2006b, 2001; Awkward 1995; Hooks 1992a), along with the fact that new ideas and terms (such as womanist) came to the fore in the African–American feminist movement, is evidence that African–American feminism is continually changing as the context of Black experiences changes. The Black Lives Matter movement is another example of this adaptation. Since its beginning in the summer of 2013, the goal of #BlackLivesMatter (#BLM) and the movement it inspires has been to create the conditions for Black lives to thrive. Later, #SayHerName, a campaign developed in response to the lack of attention paid to Black women and girls killed by police and the heterosexism, misogyny, male- centeredness, and transphobia that characterized the #BLM movement, even though it was, ironically perhaps, started by (three) African–American lesbians.

Black queer feminism as a way of being is another approach that critiques systemic structures of racism, sexism, heterosexism, classism, and other forms of oppression. It projects a rhythmic cycle of activism as it expands existing models of feminism and queer/LGBTQIA + people and popular understanding of Black feminism by centering past voices and political lives within the present (Sullivan 2019). This critique is possible by applying a similar intersectional approach as identified by Crenshaw and Hook and magnified in the writings of other prominent 20th-century Black women scholars, such as Patricia Hill Collins, Angela Davis, and Akasha Gloria Hull, among others. In the 70s, sexuality was included in the suite of structural oppression and given similar emphasis as race, gender, and class. The Combahee River Collective, a cohort of Black writers and activists, such as the Smith twins Barbara and Beverly, along with Demita Frazier redefined and spotlighted the "manifold and simultaneous oppressions that all women of color face" (Combahee River Collective 1981, 210). Their political statements serve to center the interconnectedness of race, sex, class, and homophobic power structures and precede terms, such as intersectionality and queerness in the academic and popular discourse. Black queer feminism acknowledges these nexuses and extends this perspective by highlighting their appearance within activist communities and several fields in academia, and justifies this insight by reasoning

that all effective feminist work needs to periodically self-investigate its networks. The necessity of this approach is crucial given the importance of these networks to other forms of oppression related to systemic power structures, such as language, body image, age, ableism, classism, and phobias.

Black queer feminism is almost ubiquitous in its occupation of intellectual and geographic spaces given the transnational approach to the work of champions, such as Audrey Lorde, June Jordan, Mae G. Henderson, and others. These outpourings emphasize the influence of colonialism and globalization and how they affect diverse communities within the African Diaspora. While their work is foundational to contemporary Black queer discourse, the nomenclature of "Black," "queer," and "feminist," create some distinctions, as a result of historical, geographical, social, and temporal occurrences. In the USA and other parts of the world, the term "queer" has and continues to embody violent and pejorative connotations. Even within the feminist space, terms are widely contested, such as lesbian, gay, and bisexual, and their application to the Black queer feminist discourse may be pointed to describe specific identities or sexualities. Sullivan (2019) explains that terms such as "trans*feminism" or "lesbian feminism" highlight a specific experience of "sexuality and critique the erasure of these experiences in other feminist discourses" (p. 2).

When Black queer feminism is conceptualized as a theoretical framework, it addresses these omissions. Accordingly, Black queer feminists adopt intersectional models of "queerness" to resist systematic misappropriation of queer sexuality, labor, and expressions that normalize them within more dominant constructions of race and gender. Cathy Cohen (1997), for instance, advocates for a queer political and analytical approach that centers on race, gender, and class oppression of queer people, arguing further that heterosexism and homophobia work in tandem within and beyond queer communities. Sullivan (2019) notes this perspective informs other areas of Black queer studies, which found its roots in and is closely annexed to Black feminism.

Contemporary scholars, writers, and activists claim the nomenclature of Black queer feminists as a political act. They advocate for the inclusion of queer voices in discourses where it may have been omitted and the need for intersectionality when addressing power within the feminist, queer, and Black studies field. The theoretical and political combination from the Black queer feminist perspective demonstrates Black studies' reliance on Black feminism and how Black feminism has always been queer. In this 21st century, Black queer feminists have strengthened and enhanced their mode of resistance by critiquing multisited instances of oppressive power structures, such as anticolonialism, anti-transphobic, anti-ableist, and similar themed struggles. The result has been an outpouring of global scholarship in places, such as Africa and the Caribbean (Abbas and Ekine 2013; Glave 2008), and a multidisciplinary and interdisciplinary spread to include areas, such as disability and immigration studies. Advocacy initiatives such as #BlackLivesMatter are excellent examples of liberation models that have explicitly advanced Black queer feminist models to elevate activism and social justice on the social agenda platform. More importantly, these events have created a community bond of an eclectic group of artisans, intellects, and activists to showcase Black queer feminism's concerns, which are numerous and

intertwined as are its modes of engagement. Black queer feminism is multitemporal, politically connected and a central force positioned to represent multiple communities simultaneously.

Since identities are intersectional and complex, efforts will not exist in isolation. Rather, the fight against racism will include parallel efforts to dismantle forms of oppression, such as sexism and homo/transphobia. Many of us possess multiple categories of identity that work in conjunction to structure our lives in drastically different ways. These may include dominant groups working with subordinated groups to affect real structural change, White people working in tandem with people of color to eradicate racism and White supremacy, men fighting alongside women to eliminate patriarchy, straight and cisgender people joining LGBTQ people to eradicate homophobia and transphobia, or individuals and groups bringing issues of ageism, ableism, or weight bias that perpetuate social hierarchy into the conversation. African–American feminism is myriad as it shifts, pulsates, transforms, and unfolds. To envision African–American feminism as a singular concept is to reduce its complexity. African–American feminism is partial and situated, reflects the viewpoints of its proponents; and because it is not universal, its knowledge is, therefore, incomplete. "What is always needed in the appreciation of art, or life," says Patricia Hill Collins, quoting Alice Walker, "is the larger perspective. Connections made, or at least attempted, …, the straining to encompass in one's glance at the varied world the common thread, the unifying theme through immense diversity" (Collins 2000, 270; Walker 1983, 5). In sum, African–American feminism is a complex arena, in which oppressive elements sometimes complicate and at times even undermine what fundamentally remains an oppositional and potentially liberatory project. This scholar finds it important to "bear witness" to the experience and finds this epistemology a particularly productive and informative site of inquiry and activity.

Conclusion

In this paper, I have articulated the interplay of theoretical and practical considerations in the emergence of Black feminist perspectives and activist movements in the U.S. from slavery and abolition to the present day. Rather than perceiving Black feminism as a singular amorphous movement, I trace the development of disparate branches of Black feminism including abolitionist feminism, civil rights activism, womanism, queer Black feminism, and Black feminist criticism of the Black Lives Matter movement. The methodological approach and analysis center on Black feminist epistemologies to advance conversations about Black feminist theories.

The purpose is to comingle a diverse collection of perspectives on Black feminisms to incorporate a wider audience into these conversations and to understand how their perspectives can be interpreted. Despite differences between Black feminist movements, scholars of African–American women's history often identify recurring themes, including intersectionality (of race, gender, and class), conflicts between Black men and White women, solidarity with African–American men, histories of confronting Black men about sexism, ambivalence toward White feminists and feminism, proving their wisdom, combating stereotypes (particularly negative sexual ones), reclaiming sexual autonomy and increasing economic independence, brokering solidarity

and creating networks, advancing the importance of motherhood, uplifting traditions, and presenting viable alternatives to White traditions of womanhood. The theme of this paper is thus, contemporary and historical—an invitation to highlight the importance of contemporary activism, while attending to the complex histories and erasures that have led to our present condition.

Notes

The term "black feminism" and "African American feminism(s)" are used interchangeably to denote U.S. Black feminism and African American feminism(s).

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All references to America relate to the United States of America. The term encompasses Black feminists situated within the USA and does not include all Black immigrants to the country who might not identify as African Americans.

In 1893, at the World Congress of Representative Women, Anna Julia Cooper articulated how "the white woman could at least plead for her own emancipation; black women doubly enslaved, could but suffer and struggle and be silent."

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Attitudes of High School Students toward Foreign Language Learning in Public and Non-public Education System: A demographic Approach

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Abstract: English foreign language has recently become an obligatory subject in the elementary school curricula since the first grade in Albanian education system. This paper presents the attitudes of high school students towards the context of learning the language, addressed by two scales, according to International Attitude Motivation Test Battery, (Gardner, 2004): foreign language teacher evaluation and foreign language class evaluation. It also aims to find the variances of students` attitudes according to three groups of schools: urban public high school, rural public high school and non-public high school. The subjects in this research are N=1800 high school students from five main districts in Albania, by a random sample selection method. The analysis of descriptive statistics for mean values, frequencies of the variable `attitudes` and a two way ANOVAs procedure to investigate for the variances of attitudes between the groups of schools. It resulted that from a Likert scale from 1-6, the mean value for the variable of attitudes was M=4.5, revealing that high school students have positive attitudes towards English language learning context, though not very highly positive. The research also found significant statistical differences of attitudes between the groups of schools at the value: $p = .000$ so $p<.05$, $F_{(2.1798)} = 7.789$. However the differences between the groups were very low. Post Hoc Tukey HSD procedure found that variances of attitudes for the urban public high school and rural public high school were at the value: .19161, $p =.00$; for the urban public high school and non-public high school the difference was: .00426, $p =1$ and for the rural public high school and non-public high school the difference was: -.14846, $p=.09$. However, these results are significant only for the groups of urban public high school and rural public high school, $p = .00$, $p <.05$.

Keywords: Students' attitudes, Foreign language learning, Urban public high school, Teacher evaluation, Foreign language class evaluation, Rural public high school, Non-public high school

Introduction

Given the importance English language has in Albania, due to many factors, primarily for its integrative role that has driven Albanian people to learn it over the last three decades, during post-communist era, the education policy makers have produced many reforms closely related to both formally learning and teaching this language. All the national educational strategies have foreseen that English language should be studied throughout the

whole pre-university curricula till high education (Strategy for Development of Pre-university Education 2014-2020), and most recently English language class has been added to the core curriculum at first grade, elementary school. From pre-school to grade II children are identified as Pre-A1 language users who are gradually introduced to English language and culture. In other words, English language learning is a national priority in Albanian education system, both public and non-public, in rural and urban areas all over the country.

Thus, this paper `s objective is to investigate the attitudes of high school students towards learning English language in a formal education system, in three groups of schools: urban public high school, rural public high school non -public high school. The attitudes of students are an important indicator to how interested they are to learn the language and at what degree they appreciate the teacher of the English language and evaluate the English class in their education. Albania is a country under progress trying to catch up with highly developed countries in the world. Nevertheless, it lacks many things when education is concerned. Foreign language learning, despite the fact that is taught with the same formal education curricula everywhere in the country, the logistics or educational supplies are different from one region to another, from one school type to another. This is the problem outlined in this paper, which is investigated by finding the differences of high school students` attitudes to learning English language among different groups of school included in this research.

By employing statistical analysis through SPSS 18 and using the Socio Education Model for English language learning (Gardner R. C., 2005), this research aims to present: 1. the mean values and frequencies for the variable of `attitudes`; 2. and, the impact that three different groups of schools: urban public high school, rural public high school non -public high school (independent variable) have on attitudes to learn English, (dependent variable). Gardner R.C. (2009) suggests that one of the key factors in motivating students to learn a second language refers to the characteristic of the educational environment, varying from the policies of the respective education boards and directly the classroom environment where language is learned. The Socio-Educational Model refers to the context of formal and informal learning such as listening to programs in a foreign language, speaking outside of school, communicating with foreigners, etc. " (Gardner, 2001, Public Lecture, p.4). Regarding the research questions and objectives this paper addresses, only the formal context of learning the language will be investigated in this paper.

Literature Review

One of the earliest researches on the attitudes towards learning foreign languages was conducted by Bartley D. E. (1969), who administered the foreign language attitudes scale in lower secondary schools, specifically with eight – ninth grade students in Palo Alto, California. The results showed that the interruption of the English course was reflected in those students who had less positive attitudes and these attitudes fluctuated in less positive towards the end of the school year, in contrast to this trend were the students who consistently attended the course, who showed consistent results. Empirical research in the field of motivation and attitudes towards for foreign language learning has relied on the updated original test instrument by Gardner and Smythe (1974)

and the socio education model for language learning where `attitudes` were at the very center of the Model, consequently having the greatest impact on motivation   (Gardner R.C. 1985). The conceptual construct 'Attitudes towards the context of learning a foreign language' in the Socio-educational Model (Gardner R. C, (2005), refers to students' attitudes towards the educational factor and is expressed through scales: 'Evaluation of a foreign language teacher' (10 articles) and 'Evaluation of the English class', (10 articles). Gardner in his line of study, stated regarding the role of attitudes towards language learning that: "when we focus on language learning in the school context, there is another component, which is educational role. It is clear that reactions to the classroom environment, teachers, materials, etc., have a role in the student's success in learning the material ", (quoted in Gardner, 2009, p.3). The attitudes of students in this study will be observed in the educational context for learning English, with the cultural contexts of attitudes being excluded, considering that the research focuses on formal education for English language learning, *(The Socio-Educational Model, Gardner R.C. 2005).* This Model was adopted in a research (2001) by placing at the center of the Model the variable of `integrativeness `as the greatest contributor of impact to motivation for learning the language (Socio Education Model for English language learning, (Gardner R. C., 2005).

Empirical research in the field of motivation and attitudes for foreign language learning has relied on the updated original test instrument by Gardner & Smythe. (1974). The International Test of Attitudes and Motivation towards foreign language learning was adopted from the AMTB Research Project, (Gardner, R.C., 2004, Attitude/Motivation International Test Battery). This instrument has been used, both by the compilers of the test of motivation and attitudes (Gardner et.al., 1975, 1985, 2001), in the state of Canada and elsewhere, but also by researchers independently in some countries in the world like Croatia, Japan, Poland, Romania, Spain, Albania. For these studies, findings have been published which show consistent results in empirical research of the theory of motivation and attitudes towards foreign language learning, regarding the factors that most influence students' achievement in language and their motivation to learn the language (Gardner, 1960; Gardner et al. 1975, 1985, 2001).

The conceptual construct 'Attitudes towards the context of learning a foreign language' in the Socio-educational Model (Gardner R. C, (2005), refers to students' attitudes towards the educational factor and is expressed through scales: 'Evaluation of a foreign language teacher' (10 articles) and 'Evaluation of the English class', (10 articles). Gardner in his line of study, stated regarding the role of attitudes towards language learning that: "when we focus on language learning in the school context, there is another component, which is educational role. It is clear that reactions to the classroom environment, teachers, materials, etc., have a role in the student's success in learning the material ", (quoted in Gardner, 2010, p.3). The attitudes of students in this study will be observed in the educational context for learning English, with the cultural contexts of attitudes being excluded, considering that the research focuses on formal education for English language learning, *(The Socio-Educational Model, Gardner R.C. 2005).* In Gardner's (2006) research in Spain, attitudes were poorly correlated with student achievement and ranked penultimate in the model, compared to other socio-educational factors (cited in Gardner, 2006, p.13). The model does not formally refer to the physical environment where the language learning process takes place, at least not directly (Gardner R.C., 2005, p.9).

Cognitive factors refer to intelligence, language aptitude, and language learning strategies, while affective factors are language attitudes, motivation, and language anxiety. Recently, these factors, particularly affective factors of attitude and motivation, have been a focus of several researches, Carreira, (2005); Cheng & Dörnyei, (2007); Dörnyei & Csizér, (2002), (cited at Fatma Tokoz Goktepe, 2008). Gardner (2001) states that the language learning process is influenced by the current situation and context in which the foreign language is taught. The teacher presents materials, directs questions and asks, etc., and the student responds, but these responses are moderately influenced from the student's own thoughts, needs, experiences and perceptions. Student experiences in the classroom, teacher characteristics, pedagogical procedures, etc., affect the level of achievement and motivation. This hypothesis has also been supported by other researchers.

In a long-term study with high school students on the role of a friendly and caring teacher in student motivation, Wentzel (1997) provided empirical evidence that pedagogical care could predict their motivation, even after performance control, control belief and previous motivation. Conversely, if students have negative attitudes from the beginning, the whole experience will tend to be perceived negatively. However, the combination of an experienced teacher and an informative methodology can eventually evoke positive developments in attitudes and behaviors. As far as learning skills are concerned, several learning styles are known when learning a language, such as: concrete style, analytical learning style, communicative learning style and authority-led style (Haloçi, Delija, & Tabaku, 2008). Attitudes towards the language-learning context (school context) and towards the language-speaking community (cultural context) are related to achievement, (Gardner, 2007).

Methodology

Research Questions and Variables

This paper addresses two research questions:

> 1. What are the attitudes of students toward learning English language in formal education context, public and non-public high schools, in urban and rural areas on national basis and according to the subscales for the evaluation of English teacher and English class?
> 2. Are there differences of students` attitudes among three groups of schools: urban public high school, rural public high school and non-public high school?

The variables included in the research are: `Group of school` (independent variable); `Attitudes` (Dependent variable).

Procedures

Sample Size

The sample frame in this study involves public and non-public high schools in urban and rural areas of five biggest districts in Albania: Tirana, Durrës, Shkodër, Vlora and Korçë. To calculate the sample for the research,

it was provided: the list of grades 10-12 from the whole population that includes all students who studied English as the first foreign language in public and non-public high schools, in urban and rural areas of the country, 2. in relation to the population according to the demographic variable of group of schools, urban/rural public high school / and non-public high school. The technique based on the group, 'Stage and Cluster Sampling' was applied for the selection of the sample.

Table 1 presents the sample distribution of the sample size that derived from the sample calculation technique, N = 1800. It turns out that in this study participated 1144 students from urban public high schools, 414 students of rural public high schools and 242 students of non-public high schools (see Table 1).

Table 1. Descriptive Statistics for the Distribution of the Total Sample of Students by Group of School

	School Groups	Frequencies	Percentages	Valid Percentages	Cumulative percentages
Valid	Urban public high school	1144	63.6	63.6	63.6
	Rural public high school	414	23.0	23.0	86.6
	Non -public high school	242	13.4	13.4	100.0
	Total	1800	100.0	100.0	

Instrument Reliability and Preliminary Data Tests

The overall reliability expressed with Cronbach's Alpha Based on Standardized Items coefficient of the Attitude Motivation Test used in this research is .77. As a result it is stated that the model is 77% reliable. The value of Alpha coefficient for internal reliability of the scale: 'Attitudes towards the context of language learning`, results with a value at .880. (see Table 2).

Table 2. Alpha Cronbach Coefficients for Internal Reliability of AMTB Scales

Scale	Alpha Cronbach Coefficient
Attitudes towards the context of language learning	.880

The dependent variable of `attitudes`, was subject to preliminary analysis to meet the condition of variance homogeneity, Pallant J.(2010). Levene test for homogeneity of variances showed that the dependent variable is homogeneous as the statistical significance for the variable of `attitudes` was: $p = .35$. $p > .05$ (see Table 3).

Table 3 .Homogeneity Test of the Variables of the Study Variables

Dependent Variabe	Levene Statistic	df1	df2	Sig.
Attitudes	1.051	2	1800	.350

Data Analysis

The Descriptive Statistics analysis was conducted for the first research question. Based on all the preliminary analysis and their results, as explained above, some preconditions for the realization of the two-way ANOVA analysis were met for the second research question. The post-hoc test, Tukey HSD, was used to determine which groups of schools differences were found at, and to examine the statistically significant differences between the means of each subgroup. The sum of squares, degrees of freedom, distribution F and level p = .05 of statistical significance were used.

Results

The descriptive data at the national level for the scale 'Attitudes towards the context of foreign language learning' includes a total sample of N=1800 students. Scores from 1-3 indicate negative attitudes towards the language learning context and scores from 4-6 indicate positive attitudes. In a rating system from 1-6, the mean value of the Attitudes` scale is: M = 4.28 and SD =. 08. The minimum value of the scale is 1 and its maximum value is 6. High school students (N = 1800) at the national level, have shown positive attitudes towards the context of learning a foreign language, but somehow at a low level (see Table 4).

Table 4. Descriptive Data for the Scale: Students' Attitudes towards the Context of Learning a Foreign Language

	N	Min Value	Max value	Mean value	Standard deviation
Students' attitudes towards the context of learning a foreign language	1800	1.00	6.00	4.2867	0.85

Only 0.1% of high school students, at the national level, have completely negative attitudes towards the English language learning context, 1.7% of students have moderate negative attitudes and 16.9% have slight negative attitudes. In total, a minimal figure of 18.7% of students at the national level, have negative attitudes towards the context of language learning. 35.7% of students have low positive attitudes, 42.2% of students have moderately positive attitudes and 3.5% of them have highly positive attitudes towards the language learning context. In total, a great majority 81.3% of students turn out to have positive attitudes towards the context of learning a foreign language (see Table 5).

The mean values for the subscales which comprise the scale `Attitudes toward language learning context`: 1.`the evaluation of the foreign language teacher`, M = 4.3, SD =, 961, and, 2.`evaluation of the language class`, M = 4.1, DS =, 884. Students have positively evaluated the English language teacher and the English language class (see Table 6).

Table 5. Frequencies for Scale: Students' Attitudes towards the Context of Learning a Foreign Language

		Frequencies	Percentages	Valid Percentages	Cumulative Percentages
Valid	Absolutely disagree` (1),	1	.1	.1	.1
	Moderately disagree (2),	31	1.7	1.7	1.8
	Slightly disagree (3)	304	16.9	16.9	18.7
	Slightly Agree (4),	642	35.7	35.7	54.3
	Moderately Agree (5),	759	42.2	42.2	96.5
	Absolutely Agree (6)	63	3.5	3.5	100.0
	Total	1800	100.0	100.0	

Table 6. Descriptive Data for Subscales: 1.` Evaluation of the Foreign Language Teacher` 2. Evaluation of the Language Class

	N	Min	Max	Mean value	Standard Deviation
Evaluation of the foreign language teacher	1800	1.00	6.00	4.3111	.96166
Evaluation of the language class	1800	1.00	6.00	4.1312	.88451
Valid N	1800				

Mean and Standard Deviation Values for the Scale: `Attitudes towards the Context of Foreign Language Learning` according to Groups of Schools

The mean values of the scale: `Students' attitudes towards the foreign language learning context ` for each group of school are: urban public high school students is M = 4.33, rural high school is M = 4.1 and non-public high schools the average value is M = 4.29 (see Table 7).

Table 7. Descriptive Data on Students' Attitudes towards the Language Learning Context in relation to Groups of School

		N	Mean	SD	Std. Error	Lower Bound	Upper Bound	Min	Max
						Confidence Interval 95%			
Students' attitudes towards the foreign language learning context	Urban	114	4.336	.83	.0245	4.2884	4.384	1.0	6.00
	Rural	414	4.1449	.85	.0422	4.0619	4.228	2.0	6.00
	Non-public	242	4.2934	.90	.0580	4.1791	4.407	2.0	6.00
	Total	1800	4.2867	.85	.0200	4.2474	4.326	1.0	6.00

Differences of Attitudes according to Groups of Schools

The procedure of two way ANOVA for the `attitudes of students` according to the groups of school found that between the groups there is a statistical significance value p = .000, so p <.05, F (2.1798) = 7.789 and degrees freedom, df = 1800 (see Table 8).

Table 8. ANOVA Results on Students' Attitudes towards the Language Learning Context

		Sum of squares	Degrees of freedom	Mean Square	F	Sig.
	ANOVA					
Attitudes	Between groups	141.968	2	5.587	7.789	.000
	Within groups	1499.112	1798	0.717		
	Total	1641.08	1800			

Post Hoc comparison procedure, Tukey HSD indicated that the difference for urban public high schools and rural public high schools is: 19161, p = .00; the difference for urban public high schools and non-public schools is .00426, p = 1; for the rural public high schools and non-public high schools the difference is -.14846, p = .09. The results of the differences are significant for the group of public schools in the city and public schools in the village p = .00, p <.05 (see Table 9).

Table 9. Results of the Post Hoc Procedure for Differences between the Three Groups for Attitudes

						Confidence Interval 95%	
Dependent Variable	(I) School group	(J) School group	Mean Differences (I-J)	Std Error	Sig.	Lower Bound	Upper Bound
Attitudes	Urban public high schools	Rural	.19161[*]	.04857	.000	.0752	.3080
		Non-public	.00426	.05992	1.00	-.1004	.1867
	Rural public high schools	Urban	-.19161[*]	.04857	.000	-.3080	-.0752
		Non-public	-.14846	.06853	.091	-.3127	.0158
	Non-public schools	Urban	-.00426	.05992	1.00	-.1867	.1004
		Rural	.14846	.06853	.091	-.0158	.3127

Discussion

The finding that Albanian students have positive attitudes towards the foreign language learning is similar to the findings in the study of Gardner, Masgoret, Tennant & Mihic (2004), who concluded in their research that

students in Canadian high schools had positive attitudes towards the context of learning a foreign language, but in contrast, their attitudes were more positive with a mean value for the scale M = 5.1, whereas Albanian students rated the foreign language context less than students in Canadian high schools at a mean value M=4.2.

The context of the foreign language, in this study, was measured by the subscales: evaluation of the English language teacher, M = 4.3 and the evaluation of the English language class, M = 4.1 (see Table 4). These values explain that students in high schools in Albania have positive attitudes towards foreign language teacher and foreign language class, but their evaluation of these two components is low. Almost the same conclusion was reached by Gardner & Bernaus (2004) in their study with high school students in Spain. The mean values for the attitudes of Spanish students towards the foreign language class was, M = 3.96 and the evaluation for the foreign language teacher was, M = 4.04.

The findings in this study, that high school students positively evaluated English language class and the language teacher are in line with the results of research by Nikolaou A. (2007) conducted with high school students in Greece, but with the difference that the mean values for students` attitudes in this research were lower than that in Greece (M = 80.48; M = 81.41). The fact that Albanian students had positive attitudes towards the context of language learning goes in line with the study that Nikolov M. (2001) conducted in Hungary, which found that high school students while learning a foreign language had positive attitudes towards the study of foreign languages, especially very positive ones towards German and English. In her study of unsuccessful foreign language learners in Hungary, Nikolov M. (2001) showed that 'negative classroom experiences greatly influenced respondents' motivation. Unsuccessful students, who have generally had positive feelings about learning foreign languages, attribute their lack of success to non-motivational classroom practices, particularly students assessment, focus on form, and memorization skill of learning. Respondents believed that despite their persuasion and insistence on learning foreign languages, motivation, aptitude and enthusiastic approach to the language ensure success, despite the fact that they lacked the first two factors' (Nikolov, 2001, p. 167).

In the nationwide study in the state of Canada, conducted by Masgoret and Gardner (2003) with 10,489 participants on the role of motivation and the integrative role of language in student achievement, they found that the factor of students' attitudes towards the learning context of language, relates to foreign language achievement, to the value of correlation (r .24), (cit. in Gardner RC, 2005, pp.12-13). In relation to this research it could be said that the more positive students` attitudes are, as this study reveals, the higher their achievement in language will be.

But, these findings do not go in line with the research on students 'attitudes towards the context of foreign language teaching in Lebanese schools, where it was found that students' attitudes were negative towards the traditional way of teaching, Zainol A., Pour A. , Mohammadi M. (2012). In another research, students indicated that teachers must improve the contents, teaching methods, and classroom activities to facilitate effective language learning (Tokoz F. G., 2008).

The findings in this paper show that the foreign language class and the English language teacher's activity do not differ much in public and non-public high schools, except for the group of urban public schools and rural public schools, where it turned out that students attending public schools in urban areas have more positive attitudes toward the education context of learning English than the group of students in public schools in rural areas. Despite the fact that students in non-public schools were expected to have more favorable attitudes towards the context of foreign language teaching, because the conditions for the process of a foreign language lesson are better and the language teacher is more committed, this result is explained by the increase in the quality of teaching and the somewhat greater interest of foreign language teachers in urban public schools in, as well as by leading an interesting and interactive way of the foreign language lesson.

Conclusion

This research was conducted nationwide, with a sample of N = 1800 high school students, divided in three groups: urban public high schools (1144 students), rural public high schools (414 students), and non-public high schools (242) in five main districts in Albania. The attitudes of high school students towards the formal educational context are reported favorable and positive, but at a rather low level, with mean value M = 4.28 in a Likert scale at a range 1-6. High school students evaluated positively English language teacher, M = 4.3 and the English language class, M = 4.13. In total, 81.3% of students turn out to have positive attitudes towards the context of learning a foreign language. Only 18.7% of students have unfavorable or negative attitudes towards language learning and towards the context where the foreign language is taught.

This paper concluded that the mean value for the students` attitudes in the group of urban public schools is: M = 4.3, in rural public schools: M = 4.1, and in non-public schools is M = 4.29. The results of two way Anova procedure for the differences between groups of school related to their attitudes towards the educational context, showed that between the groups there is statistical significance value p = .000 so p <.05, F (2.1798) = 7.789. The Post-hoc comparative test of Tukey HSD procedure, found that the differences between school groups regarding students' attitudes towards the context of learning a foreign language are very low. The difference for the group of urban public schools and for the group of non-public schools is 0.004, p = 1; the difference for the group of rural public high schools and non-public high schools is: -.148, p = .09. The differences of these groups are statistically not significant, as the significance value is: p> .05. The differences are significant only for the group of urban public schools and group of rural public schools, p = .000 in the value of .19.

Overall, the attitudes of high school students towards the educational context are reported positive and favorable, but at a rather low level. Students in urban public high schools have more favorable attitudes towards the context where English is taught and they evaluate the English teacher and the foreign language class more than students in rural public high schools. Also, students in non-public high schools have more positive attitudes to foreign language learning compared to the students in rural schools, even though this result was statistically insignificant. No significant differences in attitudes were found between the attitudes of students in public high

schools and non-public high schools. In conclusion it was found that school groups, divided by demography and public/nonpublic criteria have a small impact on high school students` attitudes toward learning English language in a formal context.

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The Effects of University Communication on Student Resilience and Engagement during the COVID-19 Pandemic

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Abstract: The COVID-19 pandemic has affected the lives of many people around the world. However, college-age students have been identified as a population whose lives have been particularly disrupted (Browning, et al., 2021; Madrigal & Blevins, 2021), thus placing higher education institutions in a position where they need to find ways to support their students. One way that American universities have attempted to help support their students is through the use of increased communications. The present study examined the effects of university communications on student resilience and engagement. A total of 148 students at a small, private, Midwestern university completed an online survey in which they rated university communications in terms of thoroughness, helpfulness, and thoughtfulness and responded to questions regarding their resilience and engagement. University communication did not significantly relate to resilience; however, communication did significantly predict student engagement, with communication thoughtfulness being the key predictor. Implications for universities are discussed.

Keywords: Organizational communication, Student engagement, Student resilience

Introduction

The COVID-19 pandemic caused global-wide disruption to all organizations. However, higher education institutions were particularly impacted by the pandemic. Not only have these institutions had to consistently adapt to ever-changing circumstances, but they have also seen a sharp decline in enrollment over the past two years (Conley & Massa, 2022). Additionally, college-aged students have shown an increase in mental and emotional challenges during the pandemic (Browning et al. 2021; Madrigal & Blevins, 2021). Thus, it is essential that higher education institutions find ways to support and retain their students. One way in which higher education institutions have attempted to support students during the pandemic is through increased communications. Some research studies have examined the content of these crisis communications (O'Shea & Mou, 2021); others have examined the communications' alignment with best practices (Liu et al., 2021). However, very little attempt has been made to understand the impact of the increased communication for students and the universities themselves. Thus, the purpose of this study is to examine those effects. Specifically, this study will examine the effect of university communication on student resilience and

engagement.

Importance of Resilience and Engagement

Researchers define resilience as the ability to "carry on" or "bounce back" from adversity (Garcia-Dia et al., 2013). Resilience has been shown to be associated with improved psychological well-being (Avey, et al., 2010) which has in turn been linked to increased employee performance (Luna-Arocas & Danvila-del-Valle, 2020). Resilience has also been linked directly with positive organizational outcomes such a job satisfaction and organizational commitment (Youssef & Luthans, 2007). Thus, resilience can affect employees' well-being, performance, and job attitudes. In much the same way, resilience in college students may have an effect on their well-being, their academic performance, and their attitudes regarding the school they attend. For this reason, it is important that universities understand what actions they might take to increase student resilience.

Similar to resilience, research has shown employee engagement to be associated with many positive organizational outcomes. Employee engagement is generally thought to be a positive work state that promotes "involvement, commitment, passion, enthusiasm, focused effort, and energy" (Macey & Schneider, 2008, p. 4). Increased employee engagement has been linked to positive outcomes such as increased job satisfaction and organizational commitment (Saks, 2006; Youssef & Luthans, 2007), as well as improved job performance (Christian et al., 2011). Most notably, however, research indicates that employees who are more engaged are less likely to leave an organization (Saks, 2006; Shuck et al., 2011).

Given this research on employee engagement, it seems likely that university students might be engaged in their studies in the same way that employees are engaged in their work, and researchers have shown this to be the case (Schaufeli et al., 2002; Farr-Wharton et al., 2018). Furthermore, just as employee engagement has been associated with positive outcomes for organizations, student engagement has been associated with positive outcomes for universities. These outcomes include increased academic performance of students (Schaufeli et al., 2002) and lowered intention to leave the university (Farr-Wharton et al., 2018). Thus, having more engaged students benefits the university, especially if student engagement increases the likelihood that students would wish to continue their studies with the university. For this reason, just as with resilience, it is important for universities to understand what may contribute to employee engagement. One factor that may play a role in both student resilience and student engagement is university communications. This relationship is examined next.

Role of Communication

Communication and Resilience

Although it might seem unusual that universities could have a powerful influence on individual students' abilities to cope, research has shown that organizational actions during times of change are related to how employees perceive the change and their subsequent willingness to support it (Kernan & Hanges, 2002; Paterson

& Cary, 2002; Tsai & Harrison, 2019). Thus, organizational communications can influence individual's perceptions of changing circumstances, and therefore, it seems likely that organizational communication could have an influence on resilience. Specifically, universities could potentially influence their students' perceptions of a crisis and their students' beliefs that they can persevere, thus helping promote student resilience. This link between university communication and resilience is also supported by research that demonstrates a link between certain leadership behaviors and employee resilience (Sommer et al., 2016).

This leads to the first study hypothesis which is:

Hypothesis 1: Greater quality communications will be associated with greater student resilience.

Communication and Engagement

Research has also shown a connection between internal organizational communication and increased employee engagement (Karanges, et al., 2014; Mishra, at al., 2014). Thus, it seems likely that university communications may help to increase student engagement. This leads to the second study hypothesis which is:

Hypothesis 2: Greater quality communications will be associated with increased student engagement.

Method

Participants

A total of 148 undergraduate General Psychology students (53 males; 85 females) from a small Midwestern private university participated in the study. Participants had to be at least 18 years of age to participate, and most participants were between the ages of 18 and 22. Participants received research credit for their participation.

Procedure

Participants provided informed consent and then completed an on-line survey containing the study items. The study items included demographic variables. A description of all of the study measures is described below.

Measures

University Communication

Participants were asked to rate university communications on three factors: thoroughness, helpfulness, and thoughtfulness. For each item, participants responded using a scale from 1-5 wherein 1 = *Not at all* and 5 = *To a great extent*. The items were adapted from Tsai and Harrison (2019) in which the connection between communications and employee support for change was examined.

Thoroughness, helpfulness, and thoughtfulness were each assessed using a varied number of items. Three items were used to assess thoroughness. An example item is, "Did the university provide you with detailed information regarding new campus health and safety guidelines?" Two items were used to assess helpfulness including, "Did formal communication from the university help you understand the new campus health and safety guidelines?" Finally, two items were used to assess thoughtfulness such as, "Did communications from the university make you feel cared about as a person?" Items for thoroughness and thoughtfulness of communications had good internal reliability (α = .82 and .74, respectively). Reliability for helpfulness of communication items was also reasonable, but not as high (α = .58).

State and Trait Resilience

State and trait resilience were assessed using the State-Trait Assessment of Resilience Scale (STARS; Lock et al., 2020). This scale assesses state resilience using six items. Participants were asked to indicate how they feel right now regarding those six items. An example item is: "At the moment I can cope with any difficulties I might face in my life." This state resilience subscale had high internal reliability (α = .86).

The STARS assesses trait resilience using seven items. Participants were asked to indicate how they feel in general regarding those seven items. An example item is: "I generally bounce back following stressful situations." For both state and trait resilience, participants indicated the extent of their agreement with each item using a scale from 1-4 (1 = *disagree*; 4 = *strongly agree*). This trait resilience subscale had high internal reliability as well (α = .80).

Student Engagement

Student engagement was assessed using two items that were created for this study. The items included, "I am enthusiastic about attending the university" and "I am proud to be studying here." Participants indicated their level of agreement to each item on a 7-point scale with 1 being *strongly disagree* and 7 being *strongly agree*. This measure of student engagement had high internal reliability (α = .88).

Results

Table 1 shows the means and standard deviations for each of the study variables. It also shows the correlations among each of the variables. As indicated in the table, resilience was not significantly correlated with any of the communication factors. Thus, hypothesis 1 was not supported and no further analyses regarding this factor were conducted. In contrast and as can be seen in Table 1, student engagement was significantly correlated with thoroughness, helpfulness, and thoughtfulness of communication. Each correlation was significant at the $p < .01$ level. Thus, Hypothesis 2 was supported.

Table 1. Means, Standard Deviations, and Correlations for Study Variables

Variable	M	SD	1	2	3	4	5	6
1. Thoroughness	3.88	.78	--					
2. Helpfulness	3.79	.92	.61**	--				
3. Thoughtfulness	3.87	.94	.56**	.60**	--			
4. State Resilience	2.98	.63	-.04	-.07	.00	--		
5. Trait Resilience	3.19	.52	.02	-.09	.11	.70**	--	
6. Student Engagement	5.66	1.18	.25**	.30**	.44**	.11	.27**	--

In order to further assess the relationship between the communication factors and student engagement, a multiple regression analysis was conducted. Table 2 shows the results of this analysis. The communication factors did significantly predict student engagement with thoughtfulness of communication being the significant predictor ($\beta = .40$, $SE = .12$, $p < .001$).

Table 2. Regression Results Predicting Student Engagement from Communication Thoroughness, Helpfulness, and Thoughtfulness

Variable	B	SE	t	β	F	R²
Constant	3.46***	.48	7.27		11.33	.19***
Thoroughness	-.02	.15	-.16	-.02		
Helpfulness	.09	.13	.67	.07		
Thoughtfulness	.51***	.12	4.10	.40		

Discussion

University communications were not associated with student resilience. Although this result was not as expected, it is consistent with some research, which suggests resiliency is built dynamically across time (Luthar et al., 2000). Therefore, it may be that resilience requires much more consistent interaction directly with leaders and others who can support students. In contrast to resilience, student engagement was found to be significantly associated with university communications. Specifically, thoughtfulness of communication significantly predicted student engagement. This finding supports previous research that indicates perceived support has an effect on how communication will impact employee engagement (Karanges et al., 2014). In other words, more thoughtful messaging by the university may increase the support felt by students and lead to greater engagement.

Limitations and Future Research Directions

The present study had several limitations. First, the study is correlational. Thus, no cause and effect

relationships may be determined. Second, this research was conducted with a limited sample at only one university, thus limiting the generalizability of the findings. Finally, this study asked students to reflect on university communications that had been received up to a certain point in time.

Asking students to reflect on communications in this way assumes that they understand the communications that are being referenced and that they can adequately remember them, which may not always be the case. For all of these reasons mentioned above, future research should explore the relationship between university communications and student engagement using different methods and samples. It would also be especially beneficial if data could be collected in more real time.

Furthermore, additional research should also continue to explore factors that may promote student resilience, as this study found university communications to have no significant effect on student resilience. As mentioned previously, resilience may need to be built across time, and therefore, university services that offer more consistent support to students may be the key to helping students increase their resilience. It may also be that student resilience will be best supported by other factors in the student's life outside of the university. However, further research is necessary to explore all of these possibilities.

Practical Implications

This study indicated that students benefitted from increased university communications during the pandemic. Thus, universities should continue to communicate regularly with their students, especially during turbulent times or times of crisis. Also, because thoughtfulness played a key role in student engagement, it will be important for universities to ensure that their communications with students reflect their care and concern for students and their well-being.

Additionally, because communications were not associated with increased resilience, universities should ensure that they are taking other proactive measures to support students' well-being during the pandemic and beyond. These measures might include ensuring that students are aware of services available at the university such as academic assistance services or counseling services. They might also include taking measures to ensure students understand the importance of social support and know how to seek it out.

Conclusion

This study examined the effects of university communication on student resilience and engagement. Communication did not have a significant effect on student resilience, but did significantly impact student engagement. Specifically, thoughtfulness of communication was the key predictor of student engagement in this study. Thus, universities should ensure that their communications, especially during times of crisis, are not only informative, but also thoughtful.

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Engraving Pictures of Seljuk Buildings at Ani Ruins and the Print Techniques Used in these Pictures

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Abstract: Since the city of Ani is located on the Silk Road due to its location, it has been an important city in economic, strategic and cultural areas throughout the ages. Today, it is a ruined place of Kars Province. It is located next to Arpacay on the Turkey-Armenia border. Today, most of the structures seen above ground are waiting for the day when they will be unearthed underground. With its BC history and its location on the historical Silk Road, the City of Ani is one of the most important open-air ruins in the world. With the conquest of the city by the Great Seljuk Ruler Sultan Alparslan in 1064, the Seljuk period began in the city and very important and large buildings were built during the Seljuk administration. During this period, especially caravanserais and palaces increased, and great masterpieces with the traces of the Seljuks were brought to the city of Ani. The main Seljuk structures surviving in the city of Ani today are: Ani Seljuk Sultan Palace, Ebul Menucehr Mosque, Ani Seljuk Caravanserai, Ebu'l Muammeran Complex and Turkish Baths. A few of the engravings made about these structures will be discussed in this paper. Detailed explanations about the engravings and the structure will be given. Techniques used in engravings will also be discussed and evaluated.

Keywords: Ani, Seljuk, Engraving

Definition and History of Engraving

Pictures are drawn by artists on wood, linoleum, plastic, metal, zinc, copper-based flat surfaces or recorded by different transfer methods. Then, carving and scraping processes are applied by the artist on the surface by hand or with different techniques. Then, paint is applied to the surfaces remaining in the pit or bump and the paper to be printed on is placed on it. The mold, which is painted with the paper, is passed through the press, and the paint of the pictured area in the mold is transferred onto the paper. The picture obtained in this way is called engraving picture. "Engraving, which means making patterns by carving lines on a hard surface, is considered one of the oldest techniques of art (Gölönü, 1979).

As one picture can be made from the molds obtained, many pictures can be obtained by making more than one print. The mold remains with the artist, and the painting is prepared for presentation by supporting it with carrier and protective apparatus such as a frame, for display purposes or to be delivered to the buyer.

> "Engraving, that is, carving, which started in BC, was used in the Sumerians on tablets with cylindrical seals, on the Chinese in cylindrical roll printed leaflets, in jewelry, swords, spears, etc. manifested in the materials. However, the first examples of engraving as a painting art were found in Germany in the 15th century AD. The development of the printing press in Germany in this century accelerated the transformation of woodcut engraving into the art of painting. In addition to the rapid printing of the articles on the books with the printing press, it was observed that the work of painting each page by hand one by one was very slow, and thus the idea that the painting work could be done with molding just like in the printing house, has been developed. The artist who turned this idea into the best action was the German painter Albrecht Dürer. Dürer processed religious, historical and mythological subjects on wooden and copper molds and made prints on the pages containing the subjects (Küçüköner, 2021, p:314)"

Thanks to the flat-surfaced molds made of copper mine, copper molds have been carved for centuries and very detailed engravings, especially portraits, have been made. For the first time, 17th century Dutch painter Rembrandt Harmenszoon van Rijn obtained scratches on the mold by means of acid. At the end of the 18th century, the Spanish painter Francisco Goya developed a method called resin on the mold, and for the first time developed intonation with punctuation to be added next to the line.

By the 20th century, soft plastic materials such as linoleum were added, and the artists' network continued to evolve. Spanish painter Pablo Picasso developed the technique of gradual color high printing (reduction method) by obtaining multiple colors on linol in a gradual way. Especially thanks to the different modern methods developed by the French Painter Stanley William Hayter, modern techniques, which are still used today, have been added to the classical techniques of engraving.

Thanks to its documentation feature, engravings of historical and important places and areas have been made for centuries by engraving painting. In the 17th and 18th centuries, especially Parisian travelers and painters traveled around the Ottoman lands, including Anatolia, and produced engravings of hundreds of places. These paintings are the most prominent visual documents of the past today.

The academic staff and students working at Atatürk University in the 2010s, with the aim of keeping the present-day views of the Ani Ruins as a document for the next centuries and bringing the Seljuk structures in Ani to the public through exhibitions by illustrating them, and supporting their remembering and preservation. "Ani Engravings Project" was made by Ani and more than 200 engravings were produced within the scope of the project. A total of 6 engravings belonging to Ebul Menucehr Mosque, Ani Sultan Palace and Ani Caravanserai made in the Seljuk Period were considered within the scope of this study and were tried to be

evaluated visually by explaining them technically.

Engraving Techniques

Etching

In this technique, first the surface of the zinc plates is cleaned and covered with a black acid-proof varnish consisting of chassis paint. The artist either draws the design on this black surface with scraping or scanning tips, or puts carbon paper under the design paper, or transfers the design with cellulosic thinner, or transfers it with other methods. The plate on which the design is drawn is deposited in acid, which is added at a ratio of 1/8 in water in a tub. This process is repeated seven times to obtain a linear structure on the surface in seven different tones.

After the pickling process, the remaining varnish is cleaned and the paint to be used for painting is applied to the surface. In this technique, paint that enters the remaining places in the pit will create a picture, and the paint that settles on the surface of the mold is wiped clean with paper or field. As the mold is ready for printing, it is placed on the table. After the specially prepared engraving paper is moistened in water, it is cleared of the water on its surface and laid on the mold on the tray. The felt, which is in the press, is laid on the paper and thus they are passed through the press. After passing from the press to the other side, first the felt is lifted and then the engraving paper is slowly lifted from the plate. Thus, the picture in the mold is transferred to the paper and the printing process is completed.

The damp paper is left to dry and after it dries, the signature and number are written under the picture. Thanks to the numbers and numbers written under each engraving, it is clear how many copies of that pattern were printed. After the gravure prints, the number of which is decided by the artist, are completed, the printed papers can be framed and prepared for presentation. The mold can either be destroyed or kept by the artist.

Aquatinta

In the aquatinta (dusting) technique, first the zinc plate is prepared as described in the acid etching technique, the plate is placed in the dust box and resin powders are loaded on it by means of ventilation. Then, the resin powders are adhered to the board thanks to the heat held from the bottom. Then the artist can start the etching process by transferring the design he wants to work on to the surface with different methods.

First, the white areas in the picture are covered with some varnish and the plate is placed in an acid-filled tub. After the first step, the plate is removed and covered with a light tone varnish that is closest to white. The sheet is laid back in the tub. This process is repeated seven times in total and the plate is removed from the acid cuvette after the deepest points have been achieved.

The varnish accumulation on the surface of the plate removed from the acid is cleaned with thinner and the previously adhered resin dusts are cleaned with spirit and the surface of the plate is cleaned. After the paint is applied to the surface of the plate, which has become a mold, the paint on the bumpy spots is cleaned with paper or tartan, and the printing stage is started. The printing stage is done as in the etching technique. After the printing is completed, the paper is left to dry, then it is framed and prepared for presentation.

A large number of printed pictures can be taken from the mold made in the aquatinta technique, as in the acidic engraving mold. In this technique, thousands of spots are formed on the surface and seven different sizes are obtained between the spots thanks to the stage differences in the pickling. In this way, areas of different tones are formed in the picture, and the engravings made with this technique stand out with their spotty values.

Two-Mold Color Engraving

This technique can be done with both the acid etching and aquatinta method described above. The artist determines the picture he will work with and transfers it to two different plates. Since each plate will highlight the different color of the picture, pickling is done at different times. After pickling is finished, each mold is given a different color and is cleaned one after the other and prepared for printing. First, the hot colored mold is placed on the press table and laid on damp engraving paper. As described in the above acid engraving and aquatinta techniques, it is pressed and some of the paper is lifted up. The mold, whose first printing is completed, is taken from the table and replaced with another colored mold. The engraving paper, half of which is in the air and some of it remains under the pressing cylinder, is laid back into the mold. This time the press is turned on the reverse side and the two-die printing job is completed.

Since two different colors meet on one paper in the printed pictures made with this technique, a multi-colored appearance emerges. In addition, intermediate colors are formed in the picture by mixing the colors with each other. Both primary colors and secondary colors contribute to the aesthetic appearance of the painting.

Color Wood Printing Technique

This technique began to be used in the 20th century. The technique, which was first applied by the painter Picasso on a soft and carved material such as linoleum, has become one of the ways of painting frequently used by artists over time. In this technique, the artist first prepares the material with a smooth surface such as linoleum or wood and transfers the image of the painting to the surface. While transferring, methods such as drawing by looking, transferring with carbon paper, transferring with cellulosic thinner are used. After transferring, the artist carves the places that should be white from the wood with the help of carving knives. With the help of a roller, it transfers its first color containing light tones to the surface of the wood. He places the wooden mold on the table of the press machine and completes the printing by placing the engraving paper on it. Likewise, it prints on other papers at the same stage, provided that there are at least ten copies.

The printed papers are left to dry and in this process the artist continues to carve on the surface of the board for the next step. When the carving work for the second color is completed, the paint of the second color is transferred to the surface by means of a roller and the wooden mold is placed on the table of the press. In the first stage, the printed papers are brought back and closed on the board in order. Thus, the new color is added on top of the previous color.

This process is repeated 3-5 times. The darkest color is printed last and the picture is complete. In this technique, since the pattern is carved continuously, no return can be made and the picture is reproduced as much as the number of printed papers. This method is also called the reduction method, as there is a decrease in the material by carving a little from the surface at each stage. Overlapping colors on the same paper creates an aesthetic appearance. The works that have been printed and the paint has dried are framed and prepared for presentation.

Analysis of Engravings of Seljuk Structures at Ani Ruins

Ani Abul Menucehr Mosque

Ani has always been a center of attraction thanks to its important architectural structures and the importance of the contents of these structures, and has continued to live as the civilization capital of the region for hundreds of years. "Starting from the Ani Prehistoric Ages, all kinds of movable and immovable cultural assets belonging to the Ancient Age, Middle Ages, Seljuk and Ottoman Empire periods constitute the universal historical treasure of humanity with their intangible cultural heritage" (Belli, 2014). Today, the ruins of Ani are seen as one of the largest open-air museums in the world and can be visited.

Ebul Menucehr Mosque is the first architectural structure built in the city of Ani with the start of Sultan Alparslan during the Great Seljuk Period. The mosque is known as the first mosque built by the Turks in Anatolia. "(Sultan Alparslan) ordered that the ruined walls of the city be repaired after the conquest of Ani Castle and that a mosque be built in the city (Eravşar, Karpuz, 2013)." The mosque has two basement floors under the ground, and the minaret of the nearby mosque was repaired and covered by the Ministry of Culture of the Republic of Turkey. "The mosque was built on the west-east terrace of the city overlooking Arpaçay and on a deep and high basement due to the slope line of the topography, in the south-west-north-east direction; In the basement, there are four rooms with barrel vaults, which are descended from the upper floor by stairs (Bilici, 2018).

Image 1 shows an engraving of the Ebul Menucehr Mosque from the north side. This gravure painting was made with aquatinta, one of the techniques we mentioned above, and the painting consists entirely of stained values. Light tones were given on the slope overlooking the Arpaçay Valley at a time when the sun was at its peak, and dark-toned areas were added to the picture thanks to the shadow falling under the roof and on the north wall. The land illuminated by the bright lights of the sun was made in very light tones and thus a balance

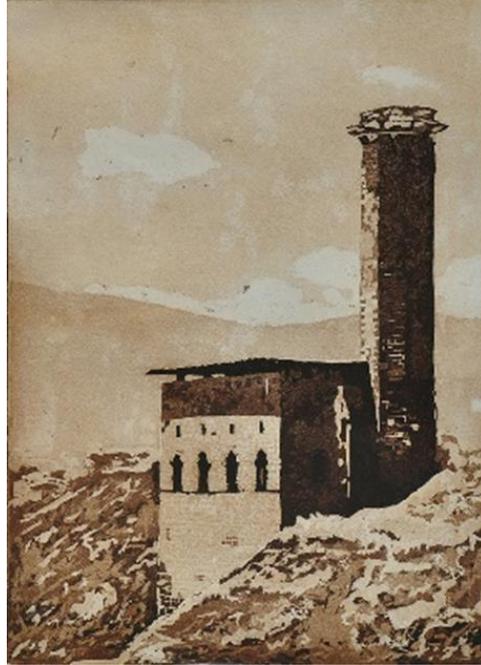of light-medium-dark tones was created in the painting.

Image 1. Ramazan İlgaz , "Ani Ebul Menucehr Mosque View from the South", 2013, Aquatinta (Engravure), 30x 40 cm. Mustafa Küçüköner Ani Engravings Archive.

Five windows on the eastern façade of the mosque were made in dark tones and balancing was achieved in the open wide space. In the minaret of the mosque, the eastern side was made illuminated, the tones on the building gradually increased, and the western part, which corresponds to the right side according to the viewer's view of the painting, is shown in the darkest tone.
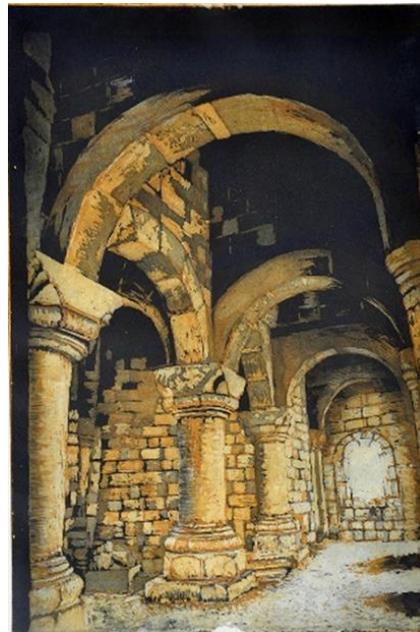
Image 2. Derya Hazır, Ebul Menucehr Mosque Interior View, 2013, Aquatinta (Engraving), 40x 30 cm. Mustafa Küçüköner Ani Engravings Archive.

Image 2 shows an engraving made by looking inside the Ebul Menucehr Mosque. Columns and arches can be seen in the central courtyard of the mosque, and daylight illuminates the interior from the window at the bottom. The mosque is one of the strongest surviving Seljuk structures in the city of Ani. The mosque, which was converted into a warehouse by foreign archaeologists at the beginning of the 20th century, was also temporarily closed to worship. As of 2022, the interior of the mosque was prepared by the TR Presidency of Religious Affairs and opened to worship again.

A quatinta technique (dusting), the artist loaded the image into two different molds during the work, and pitted the different colored parts of the two in different values in each mold throughout the process in the acid pool. After the structuring by pickling was finished, one of the molds was painted with brown paint and the surface areas were cleaned, the other was given blue paint and the surface areas were cleaned and made ready for printing. The open areas were created in both molds by keeping them in acid for a little while, and the dark areas were obtained by soaking in the acid for a long time.

Ani Sultan Palace

One of the most important Seljuk structures still standing in Ani Ruins is Ani Sultan Palace. The palace, located on the right side of the entrance from the Ani Walls, in the northwest of the city, has regained a structure close to its former state thanks to the repairs made by the Ministry of Culture in 1995. It is known that this palace, like the Ebul Menucehr Mosque, was built by Ebul Menucehr Bey, to whom Sultan Alparslan gave the administration of the city of Ani. "The lower floor of the Palace, which seems to have a three-storey arrangement with the basement below; warehouses, cellars, shelters, and the upper floors, with their arrangement of living spaces, stony, iwan, and bench, repeat the examples of residential architecture in Turkish palaces and mansions (Gündoğdu, 2009)".

Image 3. Ramazan İlgaz , Seljuk Sultan Palace Entrance, 2014, Aquatinta (Engraving), 35x42 cm. Mustafa Küçüköner Ani Engravings Archive.

In Figure 3, the front facade of the Ani Sultan Palace with the east-facing entrance door is seen. The large and long walls show the size of the Palace. There is the entrance door to the Palace between the two large walls opening to the sides and the decorations are concentrated in this area. "The crown door is divided into two parts by a profiled molding, and a door opening with a lintel and a jamb with a semicircular arched pediment is placed in the lower part. The pediment and the periphery of the door are decorated with an eight-pointed star made of red stones and black cross-shaped stones placed between them. A window with a pointed arched pediment was opened in the upper part. The pediment and the periphery of the window are also decorated with red and black rhombuses (Belli, 2014).

In this painting, the aquatinta technique is used. Thanks to the Aquatinta technique, single-tone stain values of flat walls were easily obtained and the architectural feature of the building was reflected in the picture. In particular, the decorations made of cut stones on both sides of the entrance door and on it were made by using light and dark contrasts thanks to the aquatinta technique.
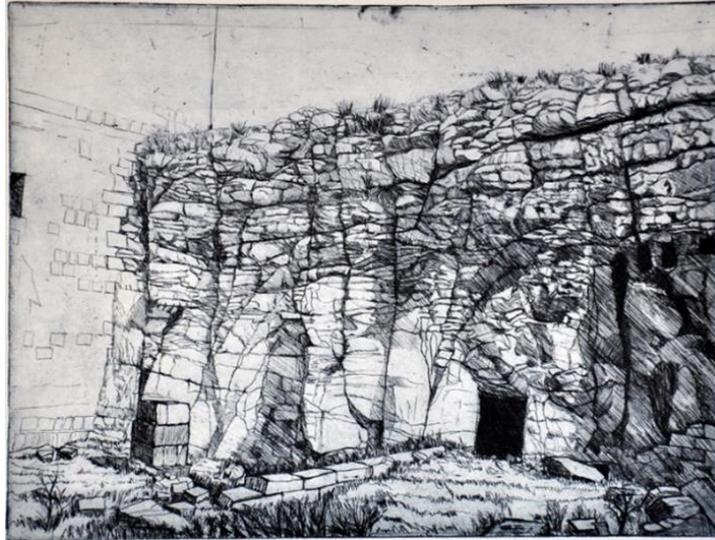

Image 4. Mustafa Küçüköner, The Rocky Attached to the South Façade of the Seljuk Sultan Palace, 2011, Aquatinta (Engraving), 35x45 cm. Mustafa Küçüköner Ani Engravings Archive.

There are additional buildings to the main building on the side of the Ani Sultan Palace. These structures, which were built depending on the bedrock, are not standing today and there are pieces of wall in their places. Figure 4 shows an engraving made by looking at this rocky area. The rock in the picture has a hard appearance, and the linear structuring has been provided to give this hard rock structure with acidic carving. The open areas created by sunlight were also drawn on the mold, but took a very short time in pickling and their lines were also very weak, thus achieving light tones in the picture.

Acid etching technique and linear paths were obtained in the painting thanks to this technique. The etching technique is the oldest known technique in engraving illustration and it has been the most used technique. It was

used especially in the painting of historical places in Europe, and in making portraits of important people as clear as headshots. Thanks to the ability to take more than one printed picture, it has been the most important reproduction method in which humanity meets such needs until the 20th century, from the point of view of replacing photography or digital reproduction.

Ani Caravanserai

Ani Caravanserai is one of the most important Seljuk structures in the city of Ani. The caravanserai was built by adjoining a ruined church wall that was there before. "The mosque, caravanserai, tomb, palace, complex, bazaar, bath, fountain, bridge and other architectural works built after the conquest of Ani by the Seljuks are of great importance as they are the first example of the activities of the Turks in Anatolia and the Balkans (Belli, 2014)".

Figure 5 shows an engraving made from an angle viewed from across the entrance door of the Ani Caravanserai. As it is known, Caravanserais is one of the architectural structures that the Great Seljuks and Anatolian Seljuks built the most. Thanks to the fact that the caravanserais were built on commercial routes such as the Silk Road, both trade could be carried out comfortably and the power of the State could manifest itself especially in the ornate crown gates of the caravanserais. "The eastern view of the main entrance allowed caravanserais from the Far East and Asia to see the gate from afar. As the caravans approached the gate, the aesthetic beauty and majesty of the gate became more and more evident. This situation attracted the attention of passengers and caravan owners (Küçüköner, 2020).
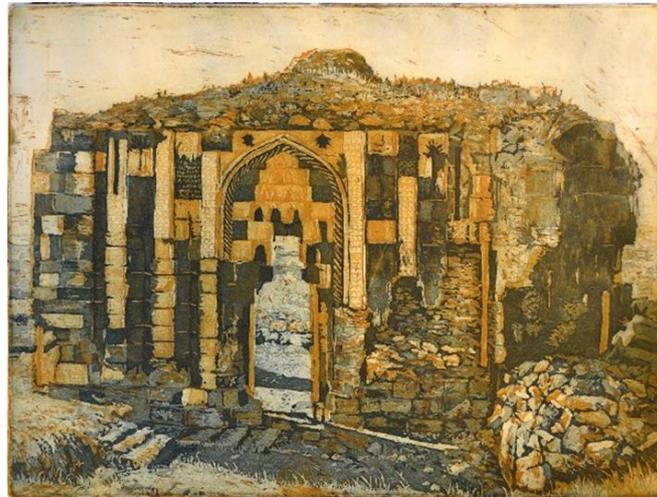

Image 5. Derya Hazır, Caravanserai Entrance, 2015, Aquatinta (Engraving), 30x37 cm. Mustafa Küçüköner Ani Engravings Archive.

This engraving was made with the aquatinta technique on two molds and a colorful image was obtained thanks to two different colors. Engraving painting with two different molds in the Techniques section is actually a difficult method for the artist to deal with. However, when the result is reached, it is a technique with aesthetic

value in terms of color. The colors of the Ani Caravanserai were easily obtained in the study, which was obtained by applying warm and cold colors to two different molds.

Image 6. Nuh Boztaş, Ceiling of Ani Caravanserai, 2009, Wood Print, 35x50 cm. Mustafa Küçüköner Ani Engravings Archive.

In Figure 6, there is an engraving showing the interior of the Ani Caravanserai. This caravanserai, which has an important place in the field of art history in terms of showing the stonework and ornamentation of the Seljuk Period, creates a Seljuk impression in every aspect. "Muqarnas fillings in the dome and half-dome transitions, colored stone decorations on the ceiling, pointed arched door moldings with rope braids, and triangular niches on both sides indicate that this structure was built under the influence of the Seljuks (Gündoğdu, 2009)."

As we mentioned above, this gravure painting was made with the progressive color high printing technique developed by Picasso. The artist first transferred his painting on a flat-surfaced wooden material as a mold. First, he carved the white areas in the picture from the wood with carving tools and printed the first stage by applying the first light color to the mold with a roller. Then, by doing the other steps as described in the techniques section above, he obtained this picture consisting of color layers on top of each other. Thanks to the progressive color high printing technique, the light and dark colors on the ceiling of the caravanserai were easily obtained, the light light tone in the front arches was obtained with light-toned colors in the first stages of the wood, and the medium and dark-toned colored stone images at the back and high of the woodwork were also produced in the middle and darker tones of the wood print. In the final stages, it has been obtained with colors that will give medium and dark tones.

Conclusion

The architectural structures of the Seljuk Period, some of which are still standing in the city of Ani today, and some of them are put into use, have very important values in that they are the first Turkish-Islamic structures built in Anatolia and especially in that they lead the numerous structures to be built in Anatolia afterwards.

Another important thing is that they have an aesthetic appearance when viewed visually. Especially the Seljuk ornaments on the entrance doors of the buildings and the wall braids made with colored stones obtained from the region attract attention. Considering this artistic appearance and historical importance of the buildings, many engravings were made in 2010 of these buildings. In this study, some of these engravings were evaluated and evaluated. As a result, it is seen that the engravings of the Seljuk Period buildings in the city of Ani can reflect these structures as they are, explain their historical importance and reflect their artistic values. In addition, the paintings were evaluated in terms of the use of acid engraving, aquatinta, colored gravure printing and color high printing techniques in the production of these engravings and comments were made in terms of contributing to the literature. Ani Ruins is like a large open-air museum today. Most of the structures seen standing in Ani Ruins, which can be visited everywhere, are underground. It is thought that there are many more Seljuk structures to be unearthed thanks to the works to be done over time. As the structures that will emerge over time, engravings will be made about them and new articles and papers will be prepared on them.

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CDIO Initiative on Student Engagement by Effective Syncretic (Lectures – seminars)

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Abstract: New trends such as globalization, knowledge economy, and information technology revolution have become essential factors affecting the development of universities in the new era. These trends have had a profound impact on the survival and growth of universities. First, universities need to shoulder the knowledge creation work in many fields related to human survival and development in the era of the knowledge economy. Secondly, they must adapt to the influence of the technological revolution on human knowledge acquisition methods and change traditions. I will further explore the new requirements for talents in the new era and adjust our talent training concepts, values and models. How universities respond to challenges through operational changes and explore new models of higher education in line with social development in the new era is a topic that universities worldwide need to think about. The study aims to create an effective model to improve the interaction between the lectures and seminars objectives and activities based on CDIO standards 3 and 8. The integrated curriculum and active learning are crucial for improving future students' engineers' skills. Consequently, students will participate efficiently in the learning process. The study will focus on the concept of a "student-centered" learning environment based on the active learning model by using the research to create a compelling student engagement in the learning process. The positioning, goals, and learning model of the work promotes the improvement of the student's engagement and learning mode in this context, pays attention to the course-student interaction in the process, stimulates students' learning initiative, and promotes the teaching reform of participating colleges. The study aims to Increase the students' work and outcome towards creative results.

Keywords: Students' engagement, Educational resources, Course ILOs, Learning environment, CDIO standards

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Introduction

The term "globalization" has become popular in the past ten to twenty years and has become a hot topic in the academic world (Bakhtiari, S., & Shajar, H. (2006)). The idea of a public knowledge space is the foundation of UNESCO and its administrative regulations, but people have not entirely accepted it. UNESCO aims to ensure that all countries have access to the best educational facilities necessary to prepare young people to play a full role in modern society and to contribute to wealth creation (Anderson, J. (Ed.), van Weert, T. (Ed.), & Duchâteau, C. (2002). However, the era we live in is an era of turbulence. Some people even do not hesitate to think that we are going through the third industrial revolution, a new technological process in information and communication, accompanied by changes in the knowledge system. Educational technology implies the disciplined use of knowledge to improve learning, teaching, and performance (Brahm Prakash Dahiya, Balkar Singh, 2021). Global trends in modern education are one of the central system-forming institutions of society that implements a wide range of socially significant functions and is influenced by ongoing social transformations. Education must take the initiative to integrate into the information society and realize education fairness. From a technical perspective, technological development will bring about changes in teaching tools, learning tools, test evaluation tools, and changes in the shape and structure of the classroom. Learner-centered teachers do not employ a single teaching method. This approach emphasizes a variety of different types of methods that shifts the role of the teachers from givers of information to facilitators in student learning (Endang Darsih, 2018). The boundary between universities and enterprises will be further broken, and the university's lifelong learning and innovation. The function will be further highlighted (Oya Tamtekin Aydin, 2014). The impact of technology on educational forms covers concepts, mechanisms, infrastructure, learning activities, and open and integrated ecology. The future-oriented educational reform always adheres to the learner-centered approach, follows the law of academic growth, reconstructs the process, mechanism, and model of talent training explores new forms of school and helps modernize the school's governance system and governance capabilities (Necmi Aksit,2007). To cultivate application-oriented and skilled talents in the mass education stage, it is necessary to comprehensively develop students' hands-on, design and innovation abilities through strengthening experimental teaching. CDIO (conceive, design, implement, operate, conception, design, implementation, operation) engineering education concept advocates "learning by doing" and "project-based learning".

Students in professional programs must practice what they have learned in the classroom. In many cases, students ask to find an objective connection between the theoretical part of the course and the practical materials, where the students work, where the output depends on a deep understanding of the course materials, aims ILOs, and the skills required (Lokanath Mishra Tushar Gupta Abha Shree, 2020). In courses evaluation, we can find several students' comments regarding the inadequate connection between the theory and the practices, between the lectures and the seminar. Others say that the lecture does not support the seminar activities. Consequently, a negative interaction between the lecture and the seminar activities can create a paradox in the learning process and negatively affect the students' outcomes. In this case, we limit the students' creativity. That will contradict the CDIO standards (3,8) proposal regarding students' development skills.

The study aims to present a multifaced reading of the students' dilemma regarding the interaction between the lectures and seminars' objectives and activities. The study will focus on the concept of a "student-centered" learning environment based on the active learning model by using the research to create effective student engagement in the learning process.

Learning Models Challenges and "CDIO" Standards (3,8)

To drive the change of learning models, we need always to consider whether learners are the center, whether it is beneficial to strengthen learners' autonomy, interaction, and innovation, firmly grasp the motivation and drive learners to learn independently, emphasize different learning methods, etc. (Serdyukov, P. (2017)). Basic principles such as value. The new scientific and technological revolution requires the creation, transformation, and dissemination of knowledge to be gathered in the same process and provides technical conditions for the unification of innovation scenarios. (Zou L, Zhu Y-W (2021)). The CDIO engineering education model is the latest achievement of international engineering education reforms in recent years. Since 2000, the Royal Swedish Institute of Technology has received huge funding.

The CDIO standards define special requirements for CDIO programs, which can act as a guide for reforming and evaluating educational programs in engineering and technology, creating conditions for their continuous improvement and integration into the global educational space. The CDIO Initiative adopted 12 standards for describing CDIO programs. These principles were developed in response to requests from program managers, alumni, and industry partners who ¨ needed specific criteria for CDIO programs and their graduates. In modern education, more and more attention is paid to the so-called "soft skills" of speaking publicly, working in a team, etc. One of the areas of modernization is the CDIO initiative. Personal and interpersonal skills and product, process, and system-building skills depend on the context they are taught and used. Personal and interpersonal skills in engineering research design courses, such as teamwork and communication, are often generic skills.

According to CDIO standard 3, the research design course mutually supports explicit connections among related content and learning outcomes (Collins, C. S., & Stockton, C. M. (2018)). The research design course guide plan identifies ways to integrate personal and interpersonal skills, and product, process, and system building skills with multidisciplinary connections are to be made. It is essential to recognize that an integrated curriculum requires a dynamic and meaningful integration throughout the curriculum. According to the recommendations of CDIO standard 8, active learning methods are included in the curriculum according to the requirements of the Swedish university. The main question is, how do active learning and experiential learning methods promote professional goals in the CDIO environment, where standard 8 debates the role of active learning methods related to student engagement directly in thinking and problem-solving activities(http://www.cdio.org). As a result, CDIO standards have defined specific requirements for CDIO programs that can guide the reform and evaluation of educational programs, create conditions for benchmarking and set goals in an international context, and serve as a starting point for continuous improvement. The teaching model of active learning has apparent advantages in cultivating

students' creative thinking, critical thinking, and collaboration ability (Asefi, Maziar, and Elnaz Imani (2018)). To learn has a goal, change passive acceptance into active learning, change straightforward narration into the joint discussion, and change after-class homework into in-class testing, which provides an effective way to implement quality education. (Alanah Mitchell, Stacie Petter, Al Harris, 2017).

The Method and Material

Teacher Role and Students' "Enthusiasm" in Active Learning and Engagement

Students are characterized as passive learners during lectures when they sit behind screens and desks, listening, jotting down notes, and where necessary giving brief answers to questions asked by the teacher or completing assignments, tests, and examinations, making them passive learners (Fapohunda Funmilayo Diepreye and Jonathan Adedayo Odukoya, 2019). Students need to come well equipped for future professional life, which requires that they be able to connect different subject areas, be skilled creative problem solvers, and find methods to absorb new knowledge (L. Brunzell och M. Ståh 2021). The teacher needs to activate the student by using active learning concepts in lectures and seminars. The teacher-student relationship and interactions can be classified in active and passive form as shown in Figure 1. That will directly affect the student's learning attitude and enthusiasm. When the teacher-student relationship is harmonious, and the students feel that the teacher likes him and appreciates him, they will learn very vigorously (Almusaed, A., Almssad, A. (2020). On the contrary, they will have rebellious psychology and oppositional emotions. The teacher must take the initiative to approach the students, understand their interests and hobbies, grasp the students' ideological trends, and conduct unfettered exchanges with the students equally. After clarifying the students' difficulties and perplexities in the study, life, employment, and even emotions, take practical actions to give them effective help and establish a trusting relationship. The teacher needs to help students to develop critical thinking skills (Tracy Douglas, 2019).
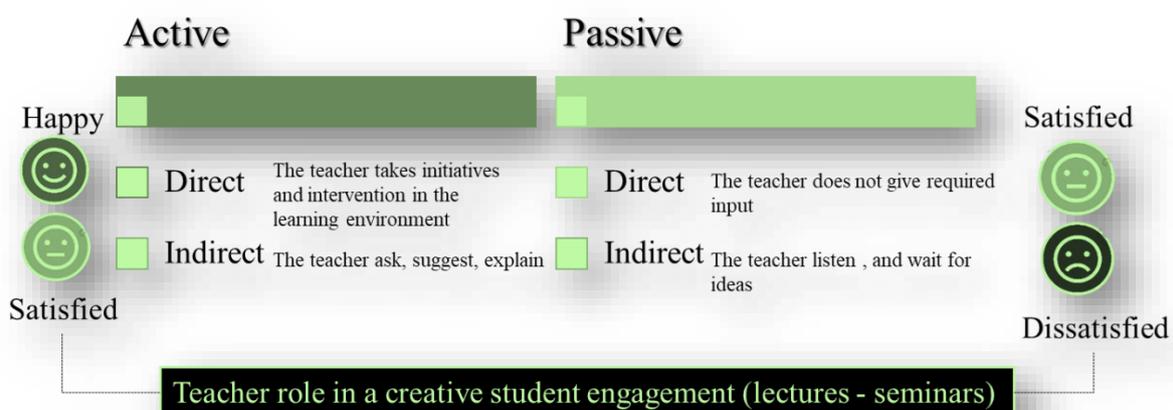

Figure 1. The Relation between Teacher Role, Course Activities, and Learning Satisfaction

Students and teachers in twenty-first-century academic in science, technology, engineering, and mathematics (STEM) classrooms face significant challenges in preparing for academic education and career (Keiler, L.S.

(2018)). The role of teachers is the focus of colleges and universities. All requirements must be clearly stated when students meet for the first time in class, and when talking about it, try to be as artistic as possible and use methods acceptable to students (Hew, K.F., Jia, C., Gonda, D.E. et al. (2020)). The role positioning, connotation, and extension of university teachers are constantly changing with the changes in the times the modern education system teachers have experienced changes in their roles to be the leader of contemporary social thought change, and then to the role of knowledge innovator in modern society integrating education, research, and social services. At present, to promote the transformation of the role of university teachers and adapt to the changes and development of the times, it is necessary to further improve the relevant policies of the construction of the teaching staff of universities; establish a scientific and reasonable incentive and evaluation system; appropriately adjust the role of teachers according to the requirements of social development; handle teaching, scientific research and serving the society, etc (Lenkauskaitė, Jurgita, Remigijus Bubnys, Erika Masiliauskienė, and Daiva Malinauskienė. 2021). The teacher needs to remember the names and personality characteristics of the students and pay close attention to their every advantage and every progress (Almusaed, A., Almssad, A., & Cortez, M. R. (2021) (see Figure 2). When students hear the teacher call her name, they will have a sense of closeness, and it is easier to feel the teacher's attention and appreciation. As for those students who love to violate discipline, once they find that you remember his name, he will have some scruples and will not dare to break the field arbitrarily.
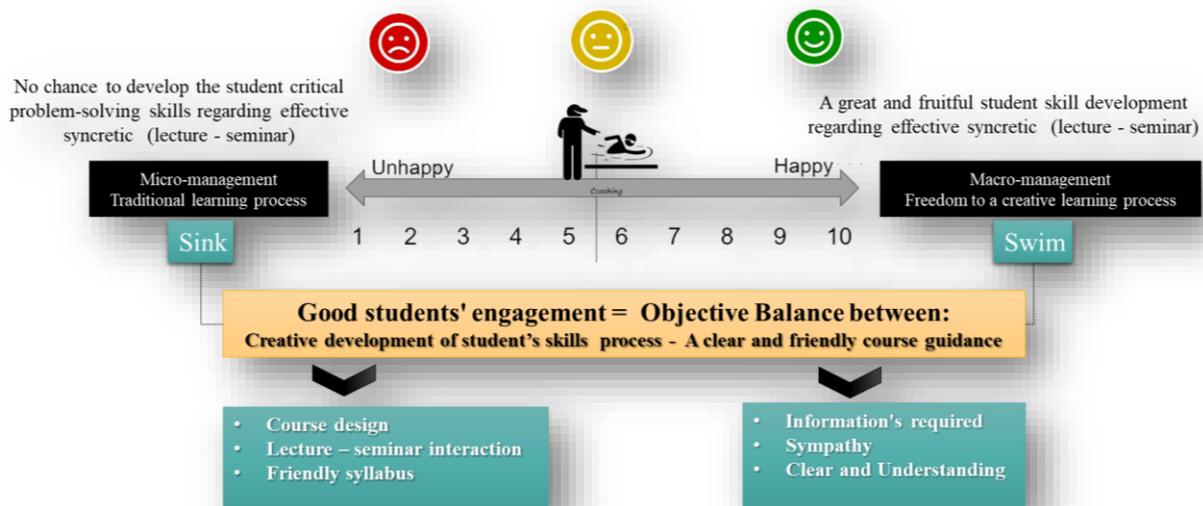

Figure 2. The Teacher Steering Process in Active Learning

Teachers' Activities between Active Learning and Learning Outcomes

Consolidating the Concept of Active Learning and Professional Needs by a Clear Learning Goal

Many students are not interested in learning; a big reason is that they think that what they have learned will not be helpful to society. Therefore, to mobilize students' enthusiasm in education, we must start with the needs of students. Consequently, I pay much attention to the connection between the teaching content and their actual lives (Filgona, J., Sakiyo, J., Gwany, D. M., & Okoronka, A. U. (2020)). When students realize the significance of this

knowledge for their future work and life, they will be motivated to learn, and then promote the students to follow the teacher's rhythm consciously and actively, and actively acquire knowledge.

Professional Project of the Course Design, Students can successfully Experience in Learning

Everyone has the need to be recognized and appreciated. This is true for students with good academic performance, even more so for students with poor performance. They usually receive less attention and appreciation. If the teacher can praise them, they will burst out of learning enthusiasm will be higher. Therefore, in classroom teaching, I pay much attention to the design of classroom questions. As a result, most students can participate in discussions and interactions (Gasell, C., Lowenthal, P.R., Uribe-Flórez, L.J. et al., 2021).

Activation the Role of Group Teaching in Mobilizing Students' Enthusiasm.

Teachers need to use the group teaching method by application of "PBL" model, by mobilizing students' learning enthusiasm (Li, L., et al. (2021)). It can be created by combing a good foundation with a poor foundation and combining students with different personalities and abilities, to avoid excessive disparity in strength between groups because this requires the teacher's level, ability, and personality characteristics of the students That will have a good effect on stimulating the enthusiasm of the student team for learning, triggering the students to discuss the atmosphere independently, and improving the teaching effect.

Activate Feeling of Teachers' "Sense of Accomplishment."

Many hours of lectures and seminars weekly bring teachers physical and mental fatigue, far from being in class. Teachers give lessons with witty words, cheers in the room, and a warm atmosphere (Dernowska, U. (2017)). But turning around to look at the reality, it's strange not to be disappointed or frustrated. Looking at every small progress in the class, the teacher will have a slight sense of accomplishment and this sense accomplishment. It will become a kind of confidence and motivation to push yourself to continue working in this direction and find ways to get more students to participate in classroom learning. And over time, small progress accumulates into significant improvement. Comparing the state of the initial class, teachers will find that we are one step closer to the highest goal unknowingly.

The Lecture and Seminar - Conflict and Harmony (Overview Reading)

Students have difficulties understanding the differences and the goals and objectives between lectures and seminars from time to time. Therefore, it makes sense to talk about the features of various forms of education briefly. Learning in higher education can be very different from previous learning experiences. While at college, the information imparted in classes is often geared towards passing exams (Ruth Doughty, Deborah Shaw, 2008). A lecture is a teacher's monologue accompanied by slides or a visual presentation on a whiteboard. In this case,

the main task of the listeners is to receive and memorize new information. The overall goal is to convey information or teach participants about a specific topic. For example, a university or university faculty teaches courses in a particular case. The lecturer will usually introduce the history, background, and other important information of any subject or topic being discussed. A seminar is a thoughtful and prepared dialogue on a given topic. (Robert J. Nash Kathleen Manning Kathleen Manning, 1996). Seminars are held to review and consolidate familiar material (see Table 1). At the seminar, the teacher discusses the most pressing issues under discussion, focuses on the subtleties and nuances, and explains problematic points. Students consolidate the information received earlier (during a lecture or practical activity) and get an idea of applying knowledge in practice. For the same reason, most universities today focus on practical alternative teaching methods for most of the courses they offer. Some people criticized it because it is a one-way communication method that does not involve many audiences' participation but focuses on passive learning.

Table 1. Lectures and Seminar Interaction and Differences

Criteria's	Description
Durations	Compared with seminars of short duration, the length of lectures is very large
interactivity	Compared with lectures, seminars are more interactive. Lectures involve formal discussions, while seminars mainly involve informal talks, but adequately.
The plan	Lectures are the main content of any study plan, but seminars are optional.
Cognition	Lectures provide a better way to cover and understand information, while seminars are designed to allow participants to develop their skills and knowledge.
Rolls	In lectures, the teacher presides over the course, but in seminars, he or he guides the participants.
Working model	Lectures use theoretical methods, while seminars use professional and practical techniques. The purpose of lectures is only to introduce and analyze information, while the purpose of seminars is to emphasize discussion and interaction.
Working area	Lectures focus on a single idea or topic, but more thoughts and ideas are being discussed in the seminar.
Presentation form	the lecture, the lecturer's thoughts, and opinions are introduced in presentations and lectures. However, in the seminar, these contents are presented in interactive tools, visual materials, and presentations.

Unlike seminars, lectures, presentation meetings, or any other learning methods, every participant participates in the ongoing discussion in workshops see Figure 3).
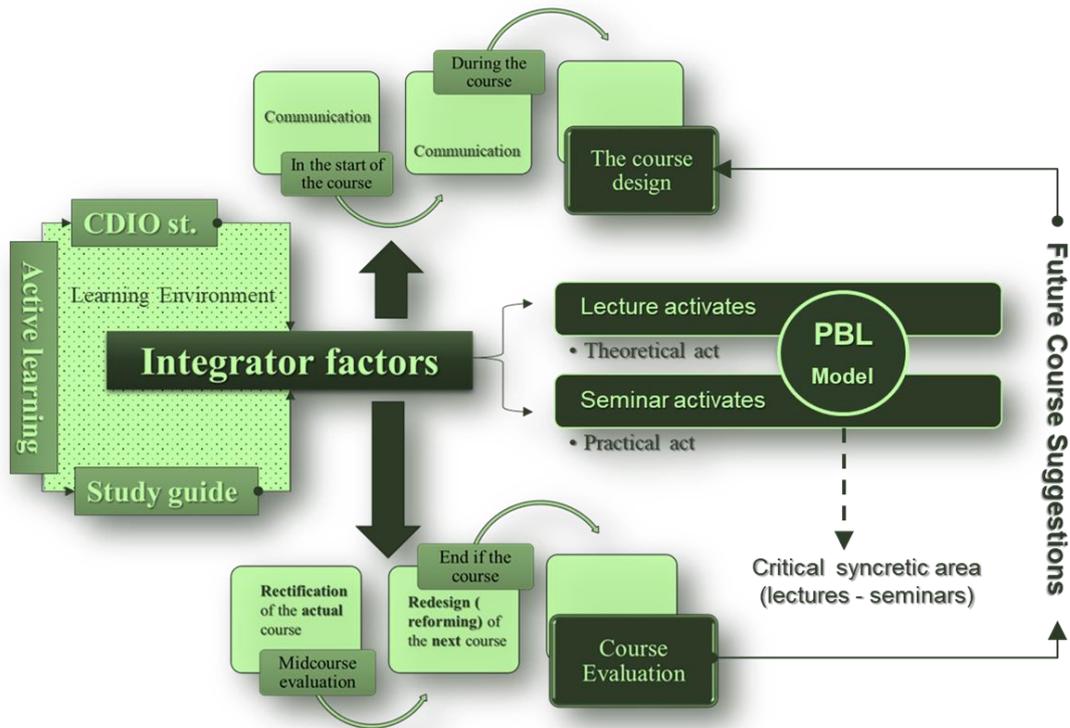
Figure 3. The Course Cycle Life and Learning Environment

Project-Based Learning (PBL) - The Research Design Course (Case Study)

The course description

The course gives students a tool and experience for the degree project, but to make a thorough and systematic analysis based on a well-defined problem is a skill that you benefit from in many professions.
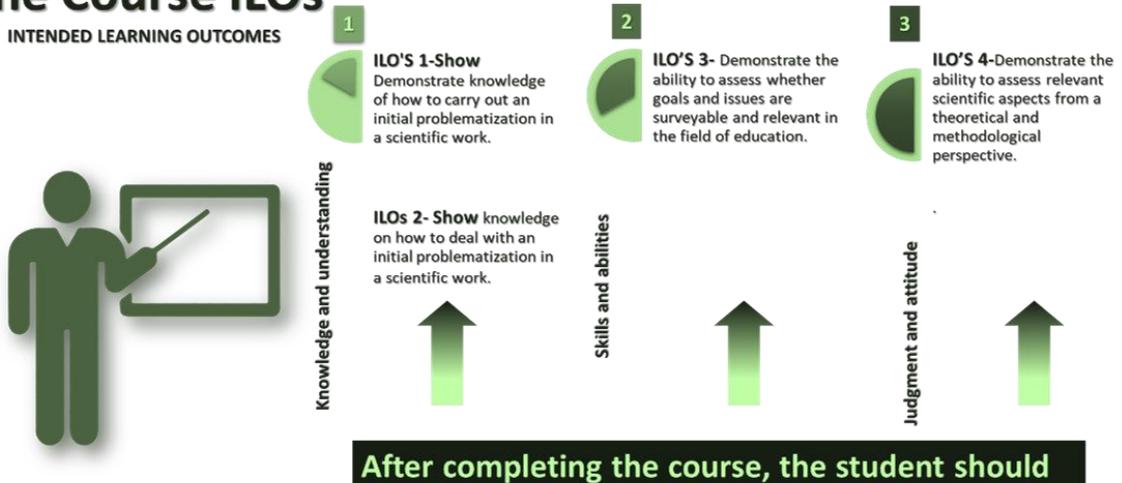

Figure 4. The Course Guide and Intended Learning Objectives

As a common thread throughout the course, there are three critical elements in scientific work methods and investigative work:

-       Identification of substance, problem formulation
-       Method and implementation
-       Information retrieval, theoretical framework

These elements are dealt with in detail during the course, theoretically in lectures and more practice during the seminar where the student's active learning is at the center. Project-Based Learning (PBL) is also called inquiry-based learning (David S., Sharon F., 2013). It is a systematic teaching method, exploring complex and real problems, meticulously designing project works, planning, and implementing project tasks. Although PBL has various models and techniques, the research design at the Swedish university takes the initiative to establish the relation between course lecture and seminar based on the PBL model and course ILO'S (intend learning outcome) (see Figure 4).

The Course Activities and Process

Students become objective researchers. Students have to use various resources to find answers and methods to solve their research problems based on two phases as follows:

- Phase I: Knowledge-based lecture. Rich projects examples support it from lectures
- Phase II : Creativity-based seminar. It is supported by active communications and synchronized with the consensual approach

The seminar will take three steps as follows:

Before the Seminar Start

The students work at home to create their research thesis proposal, based on objective reading on the practical manner in solving research Dilemma and challenged problems related a wishing objective research topic based on a previous lecture treated the research title and problem statement, and research questions, which was full of practical projects (bad situations VS good examples).
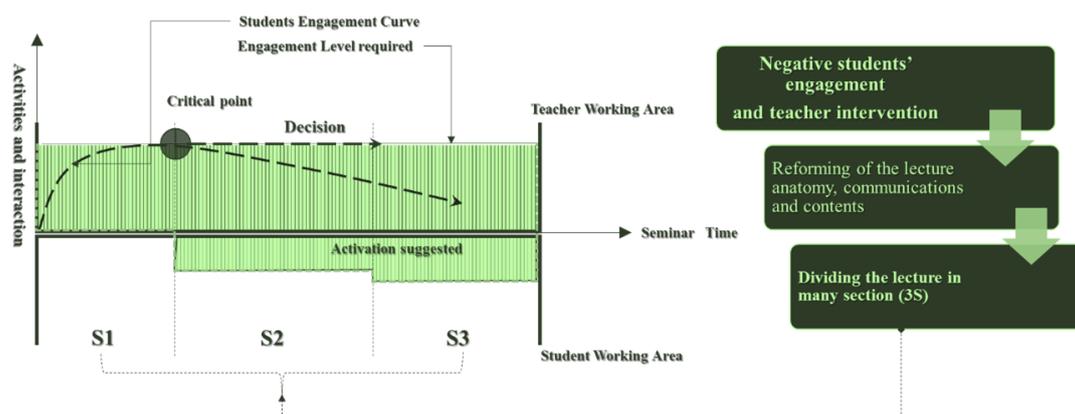

Figure 5. The Students' Activities and Engagement in Lecture and Seminar

Learning in real projects, students' initiative will be inspired by the need to solve problems (see Figure 5). Practical students' engagement in classes and workshops should be a priority for teachers as it contributes to retention and provides a sense of group teaching and community that is important to the student.

During the Seminar

- First hour (S1): The students take the role of the critics. They start to read their peer assignments and evaluate them through three areas - the topic validity, proposal suitability, and convenience of research questions, based on the practical examples from lectures, and their experience from their proposal work, by noting their comments and feedback.
- The second hour (S2): students start in objective interactions and discussion with their peers in an open mind.
- The third hour (S3): The teacher reflects and gives students his comments and feedback regarding their proposals. The teacher cooperates with the students on a personalized level.

After the Seminar Finishing

The students revise their proposal according to peers and teacher comments and feedback according to PBL model as shown in Figure 6.
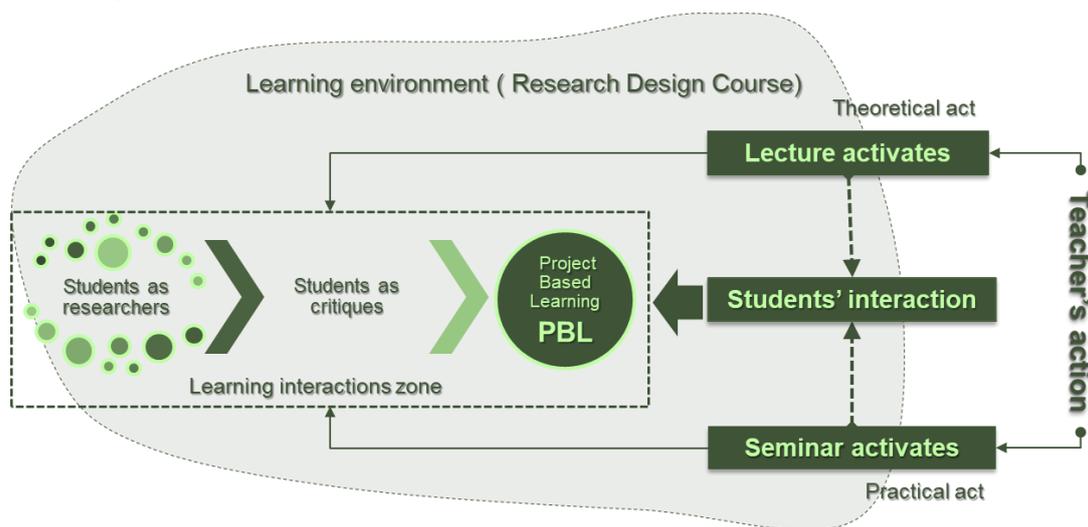

Figure 6. The Course Learning Environment using (PBL) Model

Conclusion

The unification of the scene means that the learning process is "fighting on the real battlefield", and it also means that the learning process is a process of constantly creating and enriching scenes. This determines that in the new dimension of time and space, reshape the process steps of talent training, the main body of spatial connection, etc., it is necessary to set learning goals based on real innovation needs, reshape the learning process based on the ability growth streamline, and use curriculum modules Organize learning resources for basic units, so that

teaching, scientific research, management, and services are closely centered on the mainline of ability growth, and realize the integration, interaction, and open evolution of physical space, and virtual space. The new role of teachers is to create effective correlations between course components (lecture - seminar), where a good harmony between these components will support the CDIO INITIATIVE, related to standards 3, and 8, and consolidate the course ILIO'S. The purpose of CDIO is to provide an opportunity to train engineers so that their innovation can be in the industrial technology system of "conception, design, implementation, and operation." The continuous acceleration of the technological revolution has brought huge challenges and opportunities to education. Future-oriented education should take the initiative to recognize, seek and adapt to changes. Good-oriented learning supported by a sustainable and well-course syllabus and organization will support interactivity, and innovation and reflect the design of mechanisms that encourage and drive learners to learn independently; future-oriented teachers will be in the knowledge transfer. At the same time, it will promote the overall growth of students and cultivate their innovative spirit; the future-oriented campus is no longer a closed system but a gravitational center of knowledge and information.

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Rethinking in the Intersectional Scene of the Ph.D. Supervision

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Abstract: Supervision of doctoral students is challenging because it is a complex process in which the relationship between doctoral students and supervisors is formed. A good supervision program involves a relationship that depends on certain circumstances, frameworks, prior experiences of supervisors, personalities of supervisors and doctoral students, etc. The supervision relationship requires a holistic approach that needs to be rethought from the perspective of intersectionality, as the perception of supervision tasks by supervisors and doctoral students is generally inadequate. This study aims to examine intersectionality in doctoral supervision in terms of the interrelatedness of inequalities based on identities such as gender, epistemology, culture, class, and sexual orientation from the perspective of supervisors. The goal is to provide an objective look at the complex scene of doctoral supervision today. A conceptual framework is presented to demonstrate the intersectional perspective in relation to the interrelationship of inequalities in the process of doctoral supervision.

Keywords: Intersectional scene, Gender, Epistemology, Culture, Sexual orientation, Class

Introduction

The supervisory relationship between doctoral students and supervisors is a critical success factor for earning a doctoral degree, which involves a complex process (Sambrook et al., 2008; Zhao et al., 2007). Relationships are based on supervisor choice, academic and interpersonal compatibility, and both parties are provided with the necessary tools and communication skills to ensure success (Bastalich, 2017). The term intersectionality comes from the English intersection, which can mean crossing or intersection. It is used to describe how different systems of power and grounds of discrimination influence and sometimes reinforce each other; a single system of power cannot be understood independently of others. Intersection is often used to resolve social inequalities. However, practitioners or theorists do not have a single definition of intersectionality, leading to the problem of intersectionality's definitional dilemma. Intersectionality is part of a longstanding and ongoing global history of feminist thinking and organizing by Black and other women of color that began as early as the 1830s (Bailey et al., 2019). Intersectionality is a theoretical framework for understanding discrimination and oppression that arise

from the combination of multiple individual identities (Carastathis, 2014). These intertwined and intersecting social identities can be both empowering and oppressive. Intersectionality is about not marginalizing particularly marginalized people in society by recognizing that there is discrimination that does not occur in independent countries when two or more discriminations intersect.

Today, the concept of intersectionality encompasses understanding how gender, epistemology, culture, class, and sexual orientation do not function as single, necessarily unique entities, but as mutually creating realities and shaping complex social inequalities (Collins, 2015). Intersectionality theory and practice offer useful visions for achieving "equality" across a range of issues. Despite current ambiguities in defining intersectionality, researchers have created a wealth of new knowledge about intersectionality as a methodological approach. A truly intersectional study of identity would indicate that gender, epistemology, culture, sexual orientation, and class cannot be separated from one another (Cole, 2008), but should be examined for their simultaneous effects on each of the affected constructs.

The main goal of this study is to present an intersectional analysis of gender, epistemology, culture, class, and sexual orientation in relation to the interrelatedness of inequalities in doctoral education. Consistent with the purpose of the study, two primary research questions are posed:

- ✓ How do intersectionality aspects that affect the interrelatedness of inequalities impact doctoral supervision?
- ✓ How can intersectionality aspects that affect the interrelatedness of inequalities be conceptualized within a doctoral supervision framework from the supervisors' perspective?

The following sections focus on answering these research questions by introducing the intersectional lens on doctoral supervision, proposing a conceptual framework for intersectionality aspects related to the interrelatedness of inequalities in doctoral supervision, and then discussing the potentially significant interrelatedness of inequalities that supervisors should consider during doctoral supervision.

Intersectional Scene in Doctoral Supervision

Abrams et al. (2020) describe intersectionality as an individual's connection to the power that coincides with his or her self-identity. Intersectionality faces a particular definitional dilemma-it participates in the very power relations it studies, and thus must pay particular attention to the conditions that make its knowledge claims comprehensible (Collins, 2015). The term "intersectionality" refers to the important view that race, class, gender, sexuality, race, ethnicity, ability, and age do not occur as single, mutually exclusive entities, but as mutually constructed phenomena. There are few unifying, distinct categories. Some view intersectionality as a theory, others as a heuristic concept or analytical strategy, and still others as a form of critical practice. But how to use it? This approach becomes a conundrum. If intersectionality is viewed as a theoretical approach, how can one use intersectionality to explain the intertwining of power and the specific mechanisms that shape

subjectivity, and if intersectionality is viewed as an analytical strategy, how can it be used methodologically (Hankivsky et al., 2014). The role of intersectionality creates more creativity. If intersectionality is viewed as a form of critical practice, how do practitioners use intersectionality to analyze various social phenomena, institutions, and problems. Many PhD supervisors may be unsure of how to use intersectionality effectively. Doctoral supervision is an ideal environment to learn about intersectionality and develop appropriate skills (Tarhis and Baird, 2021). The intersectional perspective is a large area of research, and this study focuses on five factors including gender, epistemology, culture, class, and sexual orientation.

Intern Aspects

Intersectional Scene: Gender

The modern age is characterized by high levels of human activity, increased communication, and contact, and thus draws increased attention to the dynamics and nature of these relationships themselves. The basic concept of "gender" came into circulation in the second half of the 20th century. It was introduced in the late nineteenth century by the American psychoanalyst R. Stoller to denote social sex, as opposed to the concept of "biological sex," which reflects the actual biological differences between women and men (anatomical, genetic, physiological) (Sanchez et al., 2019). To define gender and understand how it differs from sex, it is necessary to consider these two concepts. Gender refers to the universal biological differences between women and men. Gender is a system of values, norms, and characteristics of male and female behavioral models, lifestyles, roles, and relationships of women and men that is modeled by society, supported by social institutions, and acquired by them as individuals in the process of socialization, which is determined by social, political, economic, and cultural contexts. Intersectional gender takes into account the relationships in society between different subjects of law, including from the point of view of gender equality, which is on the agenda of the college Crenshaw, 1991). In this situation, everything that is connected in one way or another with a person, his relations resulting from his biological nature, his essence, as well as his social life, must be expressed in legal language, have its own conceptual theory, be set out not only lexically with understandable semantics, but be fixed in the form of legal norms, as well as be understandable for the whole society (Chomsky, 1995). Through intersectional gender analysis, we see how different factors are perceived differently by different groups of men/women and people in all their diversity. This includes individuals with non-binary identities and where these differences may be the result of inequalities (WHO, 2020).

Intersectional gender analysis in doctoral supervision is about analyzing how gendered power relations intersect with other social strata to affect the lives of supervisors and doctoral students and produce different demands and practices. It also explores how policies, services, and procedures can support addressing these differences. Female doctoral students supervised by female supervisors performed better in terms of self-confidence, ability to contribute, professional commitment, and career goals than women supervised by male supervisors (Gilbert et al., 1983). Female doctoral students were excluded from informal discussions, not asked for their opinions, and received less encouraging advice from male supervisors compared to female supervisors (Kurtz-Costes et al.,

2006). In a large survey of doctoral students, women showed less professional commitment and confidence in programs where most faculty members were male (Bagilhole and Goode, 1998; Uelkue-Steiner et al., 2000). Female doctoral students had more difficulty than their male counterparts in balancing their personal lives and the daily demands of doctoral study in terms of time (Leonard, 2001; Wall, 2008), which led to unresolved issues during the supervision process Conrad (2017). The main gender difference is that female doctoral students are more concerned about their personal well-being and career goals than males (Raddon, 2002). In contrast, male students only think about this issue when they are parents. Therefore, it is critical to increase caregivers' awareness of gender norms and structures, as well as hidden discrimination in academia, in order to increase their knowledge of how to care for both women and men in a gender-sensitive manner. This required a deep understanding of this topic, where supervisors' prior knowledge depends on their areas of expertise, different perceptions of the global significance of the topic, and difficulties in connecting gender issues to their own supervision practices (Schnaas, 2014).

Intersectional Perspective: Sexual Orientation

Many disagreements and debates have taken place throughout the history of psychopathology (and its main classification systems) with regards to sexual orientation and gender identity (Molero and Pinto, 20215). Sexual orientation is understood as the ability of a person to have a deep emotional, affectionate and sexual attachment to persons of the opposite sex or the same sex or both sexes, as well as to enter into intimate and sexual relations with such persons (Bailey et al., 2016). English and Fenby-Hulse (2019) recommend a thorough investigation would be useful to comprehend the relationship between doctoral studies, gender identity and sexual orientation. Wisker (2012) contends that research focuses, theoretical methodologies and interpersonal behaviors could be influenced by heterosexual, homosexual or lesbian positions of view. Lovitts (2002) explored the diverse causes of doctoral students leaving academia might be due to discrimination based on sexual orientation. English and Fenby-Hulse (2019) in their study, found that any solitude derived from the character of doctoral research was raised due to concerns connected to gender identity or sexual orientation. Given the importance of the supervisor in the academic life of a doctorate student, some studies focusing on LGBTQ and gender identity inside academic environment, explored the significance whether students could be upfront concerning their gender identity or sexual orientation and what the influence were supposed to be on their consequent practices (Kosciw et al., 2015; LaSala et al., 2008; Wickens and Sandlin, 2010). English and Fenby-Hulse (2019) indicated that most of the doctoral students stated their gender identity or sexual orientation had insignificant or no influence on their relationship with the supervisors, and with a handful reporting a positive impact. Others, on the other hand, were still concerned that disclosing their identity or orientation to their supervisor(s) might have an adverse effect on their practice or forthcoming occupation, and as a result, they felt unable to behave or speak openly about various qualities of their life. Consequently, since sexual desire is localized within people and does not always correspond to externally perceived behavior, sexual orientations should not be easily ascribed to people, and not to be reflected on supervising process and considered as a negative factor related to intercommunications on the vertical connections between (supervisor - student) or the horizontal connections

(student-student).

Extern Aspects

Intersectional Scene: Epistemology

The learning and knowledge of supervisors on doctoral supervision are mainly related with supervisors' engagement in their university's social and political environment (Halse, 2011). This is involved in supervisors' understanding themselves and their doctoral students, and how the pedagogical relationships built by the supervisors are influenced by the current framework of supervision. No matter what the supervisor's field, academic position, or supervisory experience, the study reveals that learning experiences of supervisors influence their prejudices and characteristics, and supervision involves a continuous ontological progression of 'becoming a supervisor'. Berman and Smyth (2015) provide a model that expresses the requirement for congruence between the ontology, methodology and epistemology of doctoral research, with particular declaration of facets of each aspect. Doctoral becoming concerns how students see themselves in connection to the process of becoming a researcher (ontology), how they connect to various aspects of knowledge (epistemology), how they know to acquire and produce such knowledge (methodology), and how they characterize their focus inside the field regarding principles and ethics involving the discipline (axiology) (Frick, 2010).

Pedagogical practice is improved only by those who do it, based on their life experience and reference knowledge, experience, and aspirations", because "it is in practice and reflecting on it, the supervisors consolidate or revises actions, finds new foundations and discovers new knowledge." (Rodrigez, 20213). In the practice of higher education, dialectical action is based on the tensions faced in the university every day by expanding knowledge at the expense of expanding the university, it functions through the "dialectical practice of critical knowledge production/reproduction") (Kromydas, 2017). The changes are becoming clearer now in terms of the role of supervisor and its relationship to doctoral students. The beginning to play a more active, dynamic, and constructive role, where the epistemological foundations of supervising methodology work together mainly to streamline the supervising process (Darling-Hammond et al., 2020). This is due to the fact that the methodology of a Doctoral student supervising should be understood at the university as "practice, which is a certain set of scientific knowledge, with specific characteristics of teaching and research, with mechanisms and methods of intellectual activity."

Regarding the supervising process, it occurs through interpersonal skill, through the way the supervisor provides students with the means to interact with the object of knowledge (Min et al., 2020). In this context, it is very important that the supervisor understands his function of mediation because this will be the kind of behavior that will allow "more or less margin for the self-destruction of the doctoral student's activity." However, the supervisor "faces problems and difficulties of a formative, epistemological and pedagogical order in his supervising practice". Such "difficulties and impasses have direct and immediate consequences in the student's

academic and intellectual formation."

Consequently, supervisors should support students to organize themselves appropriately to get a doctoral degree. Winchester-Seeto et al. (2014) pose a critical concern about the extent to which candidates from different cultural backgrounds and languages will embrace the university's dominant epistemological viewpoint, along with its accompanying values and attitudes. When pursuing doctorate studies, one not only changes one's epistemology by acquiring new knowledge and abilities as a researcher, but one also shifts one's ontology by developing a new habitus as a researcher.

Intersectional Scene: Culture

The culture of relations in the scientific and pedagogical sphere does not develop spontaneously but is developed through the joint efforts of scientific supervisors, opponents, members of dissertation councils, doctoral students, graduate students, and those who have already defended candidate or doctoral dissertations (Qureshi and Vazir, 20216). In addition to knowing certain rules of communication accepted in society, this area has its own norms, following which helps to strengthen mutual understanding and trust both in the scientific and pedagogical team and in the student audience. A favorable psychological atmosphere in the university stimulates the initiative of graduate students and students, and the mistakes and failures that inevitably accompany such initiatives are seen as a step forward in the team's striving to achieve excellence and increase the scientific value of research (van den Bogerd, 20218). It should be an atmosphere of trust that stimulates the birth of productive partnerships in which each participant can bring their knowledge and talents. People are judged by their behavior in society.

The culture of the doctorate student

The culture of the supervisor

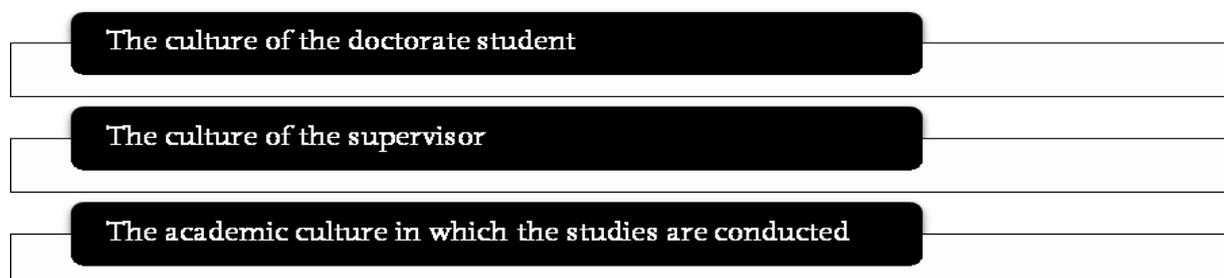The academic culture in which the studies are conducted

Figure 1. Culture Exists in a Scholarly Research Setting

The host culture influences the doctorate student's culture, involving the student's expectation of the supervisor and enthusiasm for studies, and shapes communication and collaboration with others, including the supervisor, colleagues, and other students, (see Figure 1). The supervisor's culture will determine the doctorate student's and colleagues' patterns of communication and interaction. The supervisor's culture influences his or her views toward the student and coworkers, as well as his or her comprehension of the student's issues and coping. Communication issues that might lead to poor supervision emerge when the doctoral students and supervisor's cultures inspire distinct understandings (Buttery et al., 2005; Watts 2008) (see Figure 2).
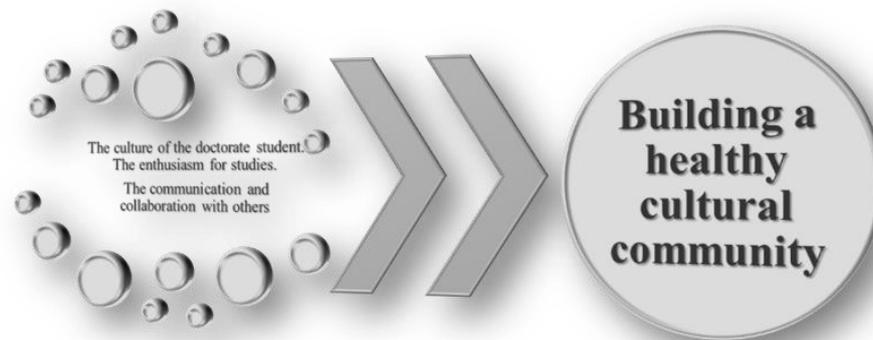
Figure 2. The Intersectional Perspective according to Healthy Cultural Community

When building relationships with a supervisor in real modern conditions, Ph.D. students should not wait until she/he proposes something interesting and organizes joint activities. The supervisor, of course, must take the "first step", but not all of them are ready to do this, and then the Ph.D. student herself/himself should gradually take the initiative in this matter (Wooldering et al., 2015) The intensity of communication, the level of interaction, and the efficacy of consultation between the student and the supervisor are crucial (Malan et al., 2012). To summarize, a doctoral student's culture becomes crucial in supervision because it offers meaning and context for both parties and impacts all human being's expectations and views. The status and role characteristics of the supervisor have a huge impact on the scientific career of a Ph.D. student. The Supervisor's well-known name, high status, and reputation help his students get a job, publish scientific papers, more often and earlier chosen to various scientific organizations, etc. (Belavy et al., 2020). The Supervisors popularity provides her/his students with the opportunity for broad scientific contacts, which is an important prerequisite for a quick and successful scientific career. This necessitates the requirement for supervisors to be culturally competent to avoid probable cultural misunderstandings that may arise (Ekblad, 2007). These interferences target communication, planning, and empathy in the context of supervised practice for supporting doctoral students from different cultures (Watts, 2008), forming self-help assemblies amongst students from various cultural backgrounds (Wisker et al., 2007) and recognizing the issues related with emotion and psychology that arise as a result of cultural diversity (Buttery et al., 2005).

Intersectional Perspective: Class

Ostrove et al. (2011) state that social class is interrelated with race and gender to envision academic self-concept. Female graduate students believe they are less valued than male graduate students (Margolis and Romero, 1998; Kurtz-Costes et al., 2006) As a result, for women's sense of belonging in graduate school, class backgrounds may be more important than men. Conversely, possibly women's gender is s more significant than men's, and, men's class background is more relevant since their gender has distinct consequences regarding their class (Ostrove et al., 2011). Manathunga (2019) applies Bennett and Burke (2017)'s research on time in higher education to doctoral studies to demonstrate how time is practiced in a different way by doctoral students

of different classes and is deeply influenced by their unequal power interrelations. The influence of current doctoral times capes on native, migrant, refugee, international and women doctoral students introduces equity matters due to the variety of obligations expected of students within a relatively short timeline. Doctoral students are supposed to have ordinary, stable, and foreseeable time however most of these students don't have (Bennett and Burke, 2017). Doctoral students whose cultural understanding is undervalued, former scholar and practiced background are overlooked or seen in insufficient conditions and supervisors implement an extremely remote, research-focused attitude, may experience a loss of self-esteem and motivation to continue their education (Manathunga, 2014).

The conceptual framework for intersectionality aspects that involve the interdependence of inequities in doctoral supervision is presented in Figure 3.
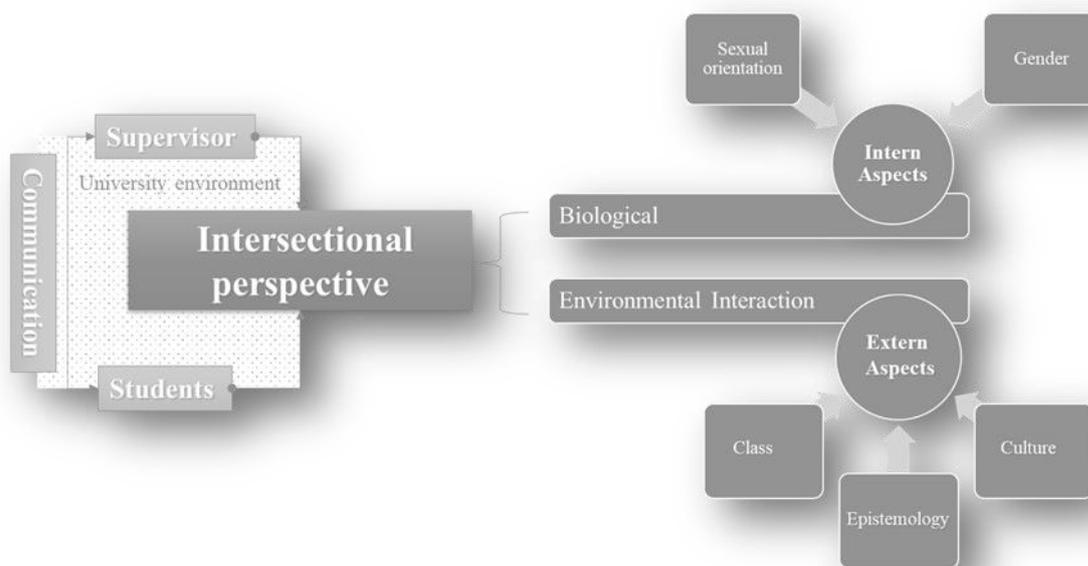

Figure 3. Conceptual Framework of Intersectional Perspective in Doctoral Supervision

Many people believe that homosexuality is sexual contact between people of the same gender. However, it is incomplete. It does not consider two important aspects - the context in which the sexual interaction takes place, and the feelings and sensations of the participants. Nor does the definition cover all meanings of the word homosexuality, which can refer to erotic attraction, sexual behavior, emotional attachment, and self-determination (Eliason & Morgan, 1998).

Discussion

Regarding the interrelationship of gender inequalities, supervisors should consider less professional commitment and self-confidence among women in programs where most faculty members are male. Women Ph.D. students may face more difficulties than their male colleagues in managing time to balance their personal

life and day-to-day requirements of doctoral study. Regarding the epistemology related interrelationship of inequalities, supervisors should consider learning experiences may influence their prejudices and characteristics, and supervision involves a continuous ontological progression of 'becoming a supervisor'. Supervisors should help students connect with various kinds of knowledge and acquire new knowledge and skills as researchers. Regarding the culture related interrelationship of inequalities, supervisors need to be culturally competent to avoid probable cultural misunderstandings and recognize the emotional and psychological issues that may arise because of cultural diversity.

Regarding the interdependence of class inequalities, supervisors should be concerned about the fact that graduate students may believe they are less valued than men. For women's sense of belonging in graduate school, class backgrounds may be more important than men's, and equity matters due to the variety of obligations expected of students from different classes within a relatively short timeline. PhD students are expected to have an ordinary, stable and predictable time, but most of these students may not. Regarding the sexual orientation related interrelationship of inequalities, supervisors should consider that research focuses, theoretical methodologies and interpersonal behaviors could be influenced by heterosexual, homosexual or lesbian positions of view, doctoral students may leave academia due to discrimination, and any solitude derived from the character of doctoral research may be raised. Supervisors should take into account the importance of knowing if students can be candid about their gender identity or sexual orientation and how they are expected to influence their practices. Table 1 presents potential important links between inequalities that supervisors should consider during doctoral supervision.

Table 1. Potentially Significant Interrelationship of Inequalities regarding Intersectionality in Doctoral Supervision

Interrelationship of inequalities	Gender	Epistemology	Culture	Class	Sexual Orientation
Career commitment	■				
Self-confidence	■				
Managing time to balance	■				
Personal well-being	■				
Learning experiences of		■			
Connect to various types of		■			
Acquiring new knowledge and		■			
Culturally competent			■		
Cultural misunderstandings			■		
Emotional and psychological			■		
Feel less valued				■	
Sense of belonging				■	
Times capes				■	
Research focuses, theoretical					■
Solitude derived from the					■
Significance of students					■

Conclusion

This study sought to understand the intersectionality of doctoral supervision with respect to the interrelationship of identity-based inequalities such as gender, epistemology, culture, classes, and sexual orientation from the point of view of supervisors. A conceptual framework is presented to demonstrate the intersectional perspective concerning the interrelation of inequalities in the doctoral supervision process. Potentially significant links between inequalities with respect to intersectionality in doctoral supervision have been identified in the literature. For future studies, an investigation of a mixed (qualitative and quantitative) approach involving interviews and questionnaire surveys with the PhD students and supervisors are suggested to validate the significant interrelationship of inequalities regarding intersectionality in doctoral supervision process.

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Household Consumption Spending Disparities as a Function of Economics Education

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Abstract: A major challenge in economics and financial education is frequently the attempt to explain the disparities in household consumption spending. Household income determines the quality and quantity of goods and services that a household could consume. The amount of income available to a household is a major determinant of the disparities in household consumption spending. Although the role of income in household consumption spending is widely documented, other economic factors also contribute to the disparities such as accumulated wealth, price, taste, and preference of the household. Interestingly, these economic factors or economic knowledge are learnable and acquired from basic economic education. Consequently, this paper assumes that basic economic education knowledge predicts household consumption spending disparities. A pre-survey of 120 out of 150 individuals participating in professional development training indicated that they have difficulties living financially well as compared to some of their friends with the same or less salaries and similar family responsibilities. After participating in basic economics education classes, a post-survey from the same participants was analyzed using SPSS multiple regression. The result from the data analysis and the progressions of the paper revealed that economic education significantly predicts household consumption spending disparities.

Keywords: Household income, Consumption spending disparities, Economics education

Introduction

While most individuals engaged in community economics and financial management continuing education agree that income is the determinant of consumer spending, most find it challenging to explain why the disparities in consumption spending within limited-income households. The challenge aligns with a common assertion that household income determines disparities in the quality and quantity of goods and services that the household consumes (Attanasio, & Pistaferri, 2016). Although it is obvious that household consumption spending is a function of the household income, it is not obvious why families that make similar incomes and have similar responsibilities are not able to derive similar utility, the satisfaction derived from consuming goods and services, from similar incomes. These disparities in household income utilization are therefore an indication that there are other factors besides income accounting for household consumption spending disparities. These

factors other than incomes are not far fetched and are encapsulated in economic education contributing to household consumption spending disparities such as the amount of accumulated wealth, price, taste, and preference of the household goods and services (Landes, 1990; Appleton, 2001; Lyubomirsky, 2001; Smeeding, 2006; Case, & Fair, 2007).

This paper assumes that household consumption spending disparities are a function of economic education (the amount of accumulated wealth, price, taste, and preference), which are also essentially the foundation of financial education including income (Blundell, Pistaferri, & Preston, 2008). Two households may have the same qualifications, and make the same income, but disparities may exist in their consumption spending (Lyubomirsky, 2001). Therefore, it is difficult to assert that income disparity is the sole reason for the consumption spending disparities. If this assertion is correct, what else besides income could contribute to household consumption spending disparities.

Limited income individuals who were engaged in basic economics training indicated in a survey before the training disproportionate difficulties in living financially well as compared to some of their friends with the same or lesser income and similar family responsibilities (Stantcheva, 2022). After participating in basic economics education classes in the training, a post-survey was administered to the same participants to understand the effect and relationship of economics education on household consumption spending disparities (Krueger, & Perri, 2006).

Both surveys (pre and post) were analyzed based on SPSS multiple regression to predict the effect and relationship of basic economics classes on household consumption spending disparities. The results indicated that economics education (the amount of accumulated wealth, price, taste, and preference) significantly predicts household consumption spending disparities. The following sections of this paper deal with the method, results, discussions, and conclusions including a list of references cited in the paper.

Method

201 participants attended community classes in economics education (income, wealth, prices, taste, and preference) to acquire knowledge in managing household consumption spending. Before participating in community classes, a pretest 5-point Likert scale survey was assigned to participants to collect data on their economics knowledge and understanding of income in household consumption spending.

After participating in the community classes a post-survey (the same as a pretest) was assigned to participants to capture the difference between the pre-test and post-test surveys. The community classes in economics and financial education comprised of the amount of income available to the household, the amount of household accumulated wealth, the price of products the household consumes, and the taste, and preferences of the household. Below is a brief discussion of each of the basic economics classes.

The Amount of Income Available to the Household (AIAH)

The amount of income available to the household at any given period is an essential factor that accounts for disparities in household consumption spending. A hypothetical example can be visualized in the Applegate and the Patterson households. If the Applegate household has twice as much monthly income as the Patterson household ($1,000) and assuming all things are equal, the Applegate household would have twice ($2, 000) as much spending ability as the Patterson household. Additionally, if the consumption baskets for both families are equal in monthly spending ($500) then, the Applegate household would be three times richer than the Patterson household would be based on their unspent income. From this hypothetical example, the amount of income available to the household accounts for major disparities in household consumption spending. In a nutshell, the higher the household income the higher the ability to spend on consumer goods and services. The lower the income the lower ability to spend on consumer goods and services. Therefore, income available to the household is a major factor in the disparities in household consumption spending (Jenkins, 2000). The household depends on income more than any other factor in consumer spending, making income the dependent variable in this study.

The Amount of Household Accumulated Wealth (AHAW)

The household's accumulated wealth is also an obvious determinant of the quantities of goods and services that the household consumes, which accounts for the disparities in household consumption spending. There are some households where money management may not be a problem to sustain their present and future consumption at any given time. Many households have accumulated wealth that can sustain their consumption spending for years even in times of temporary financial adversities. Other households with zero wealth or zero savings depend on paycheck to paycheck with restricted household income for consumer spending. Yet, limited household income earners can be motivated to learn to acquire knowledge to increase their household income (Baker, Farrokhnia, Meyer, Pagel, & Yannelis, 2020).

The Price of Products the Household Consumes (PPHC)

Price is an indication of the actual market value of any goods and services. Price is also a measure of market demand (the willingness and ability to buy) and supply (the willingness and ability to sell). There is a general principle in economics: the higher the price, the lower the demand (people are less likely to or should not buy). Conversely, the lower the price the greater the demand. The derivation of this principle is two economic laws: The Law of Demand, which states that consumers should buy goods and services at lower prices and should not buy at high prices; and the Law of Supply which states that suppliers should supply goods and services or products to the market only when there is a higher demand for the product. Inherently, if the price for the product that a household is willing to buy is becoming unaffordable, the household should not buy. Most limited-income households should practice the Law of Demand and adhere to it. Note that if any household

ignores this Law of Demand there are no legal consequences, no police arrest for breaking the Law of Demand, but the effect could be an eventual money hardship (Ngobo, 2011).

The Tastes and Preferences of the Household (TPH)

Taste and preference account for disparities in household consumption spending. Regarding taste, most people would like to eat food that tastes good. Since there are plenty of good tasty foods households have preferred preference on the quality of the food, and if they have to choose from various food to eat they would elect their preference. Preference goes along with taste, and if a consumer does not care where to go for a burger meal, then the consumer might not care about going to McDonald's, Burger King, or Checkers. To this consumer, the taste of a Burger meal has no preference in the dining decision-making. Tastes and preferences become a little complicated when price becomes a major factor (Spiller, & Belogolova, 2017). A household with high taste and preference would spend more money than others with low taste and low preference (Hoyer, & Stokburger-Sauer, 2012).

Level of Economics and Financial Education (EF-Ed)

Although income, the amount of accumulated wealth, the price of products, and tastes and preferences are economic factors embedded in disparities in household consumption spending. Yet, these factors are not fully explored to bring to understanding the implications of economics and financial education regarding the household consumption spending disparities. Some wonder if financial education makes a difference in the financial decision-making of most households (Hilgert, Hogarth, & Beverly, 2003). Interestingly, holding such an opinion does not stipulate that learning basic economics and financial decision-making does not increase the level of understanding in most households (Hastings, Madrian, & Skimmyhorn, 2013). This paper explores some pertinent economic factors affecting disparities in household consumption spending and examines if each of these economic factors (after participating in classes) predicts household consumption spending disparities. In this study, pre and post-surveys were assigned to each of the classes to assess participants' economics and financial knowledge acquired before and after each class.

Data Analysis

The data from both pre and post-survey were collected and analyzed using SPSS multiple regression analysis. The importance of the analysis is to examine if there is a relationship between the dependent variable, Household Consumption Spending Disparities based on Income (AIAH), and the independent variables, the Amount of Household Accumulated Wealth (AHAW), Prices of Products the Household Consumes (PPHC), Tastes and Preferences of the Household (TPH), and the Level of Economics and Financial Education (EF-Ed) of the household. Moreover, the significance of the effect of each of the independent, explanatory, or predictor

variables in contributing to predicting the dependent variable was also essential and examined. The general linear multiple regression model can be summarized as $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$

This brings the study to the following hypotheses:

- H_0: $\beta_{AHAW} = \beta_{PPHC} = \beta_{TPH} = \beta_{EF\text{-}Ed} = 0$ (No relationship between the dependent variable and the independent or explanatory or predictor variables, combined)
- H_1: At least one of the β coefficients is not equal to 0

Results

The following results are based on data analyses using SPSS from pre and post-surveys data collected from 201 participants. The ANOVA table below summarizes the regression model, and the relationship between the dependent variable and the predictor or explanatory variables combined.

	ANOVA					
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4126.520	4	1031.630	10.749	.000[b]
	Residual	18811.639	196	95.978		
	Total	22938.159	201			

a. Dependent Variable: Household Consumption Spending Disparities based on Income (AIAH)
b. Predictors: (Constant), Amount of Household Accumulated Wealth (AHAW), Price of Products the Household Consumes (PPHC), Tastes and Preferences of the Household (TPH), Level of Economics and Financial Education (EF-Ed).

ANOVA

ANOVA is the analysis of the variance and determines if a regression relationship exists in the model between (a) the dependent variables and (b) the independent or predictors predicting the relationship on the above ANOVA table.

Relating to the hypotheses mentioned above under data analysis:

- H_0: $\beta_{AHAW} = \beta_{PPHC} = \beta_{TPH} = \beta_{EF\text{-}Ed} = 0$ (No relationship between the dependent variable and the independent or explanatory or predictor variables, combined)
- H_1: At least one of the β coefficients is not equal to 0

The ANOVA table helps to address the hypotheses by looking at the relationship on the table with the variables. What instructs the result most is the F Test statistics by examining if it is statistically significant or not.

The F-statistics is a test of the significance of the entire regression model and at $\alpha = 0.05$, and in this case and as indicated on the ANOVA table, the F-statistics, the regression model is statistically significant, $p = .000 < 0.05$. Therefore, based on the hypotheses, the F statistics is significant: F = 10.749 (p-value, p = .000), at $\alpha = 0.05$. As such, we reject H_0, because there is evidence of a regression relationship between the dependent and the independent variables.

Looking at the effects of each predictor in contributing to the overall regression model the coefficients table below indicates the t-statistics and significance of each predictor

Coefficients

	Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	60.822	5.487		11.085	.000
	Amount of Household Accumulated Wealth (AHAW)	5.165	.962	.348	5.370	.000
	Price of Products the Household Consumes (PPHC)	-3.062	1.002	-.198	-3.057	.003
	Tastes and Preferences of the Household (TPH)	-1.931	.956	-.131	-2.021	.045
	Level of Economics and Financial Education (EF-Ed)	-1.482	.834	-.115	-1.778	.077

a. Dependent Variable: Household Consumption Spending Disparities based on Income

b. Independent (Predictor) Variables: At $\alpha = 0.05$

   b_1. Amount of Household Accumulated Wealth (AHAW)

      $\beta = .348$, $t(201) = 5.370$, $p = .000$ (the regression is statistically significant $p < 0.05$)

The Amount of Household Accumulated Wealth (AHAW) is a significant predictor of household consumption spending disparities. Wealth is positive for household consumption spending

   b_2. Price of Products the Household Consumes (PPHC)

      $\beta = -.198$, $t(201) = -3.057$, $p = .003$ (the regression is statistically significant $p < 0.05$)

The Price of Products that the Household Consumes is a significant predictor of household consumption spending disparities. Having a car or no car makes a difference, and more, the quality of the car or the shopping choices (quality/quantities) for goods and services of the household accounts for consumption spending disparities. However, although there is a significant relationship, there is also a negative effect on the dependent

variable (Household Consumption Spending Disparities based on Income) when the household is not prudent in spending.

b_3. Tastes and Preferences of the Household (TPH)

$\beta = -.131$, $t(201) = -2.021$, $p = .045$ (the regression is statistically significant $p < 0.05$)

The tastes and preferences of the household (TPH) are a significant predictor of household consumption spending disparities. Although tastes and preferences are significant predictors, they hurt the dependent variable (Household Consumption Spending Disparities based on Income) based on the negative effect. When tastes and preferences are big in the household, households will be spending more income on consumption spending than on saving.

b_4. Level of Economics and Financial Education (EF-Ed)

$\beta = -.115$, $t(201) = -1.778$, $p = .077$ (the regression is not statistically significant $p > 0.05$)

The level of economics and financial education (EF-Ed) knowledge of the household contributes to the overall regression model, but by itself, it is not statistically significant in accounting for household consumption spending disparities. A household may have a high level of economics and financial knowledge. Still, the household may be going through a little hard time due to transitional difficulties. This could be typical of recent college graduates dealing with student loans and struggling to find appropriate jobs to their level of accomplished education.

Although these economic factors may have different impacts on causing household consumption spending disparities, as a whole if combined the sum is statistically significant to the dependent variables (Household Consumption Spending Disparities based on Income) than the parts.

Graphical Results

Additionally, results from the study can also be visualized from the graph which despite its inconsistency, it follows the bell-shaped pattern of normal distribution attributed to a regression norm.
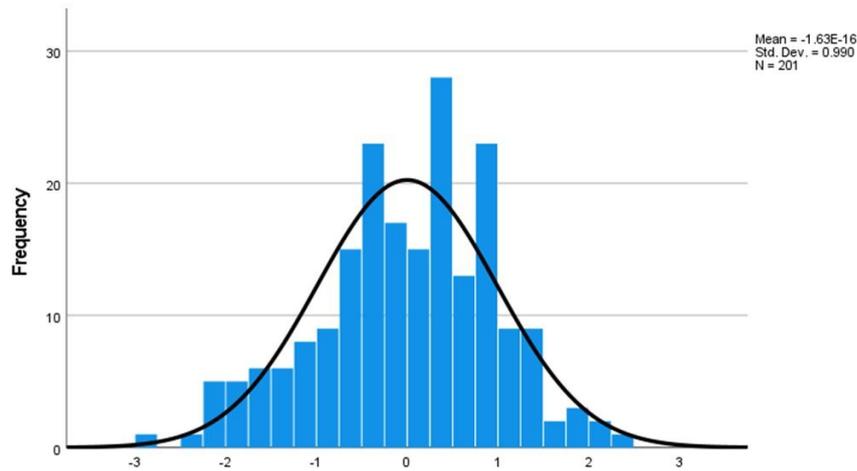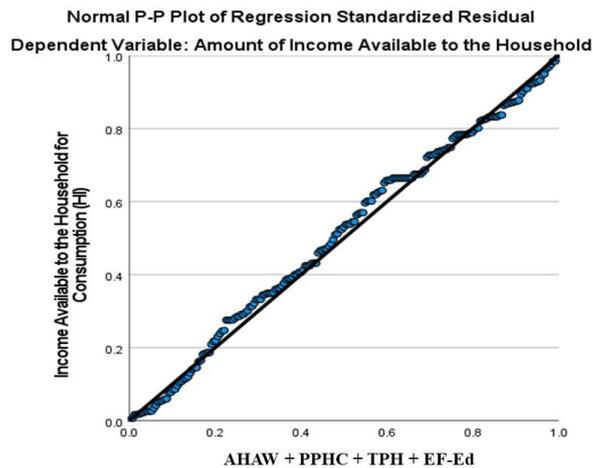
Chart Results

The normal probability plot of the regression indicates homoscedasticity. It is obvious that the data are evenly spread across the regression line, and the dots are closer to the regression line.

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Amount of Income Available to the Household

Discussion

This study focuses on struggling income earners or limited income households that are having difficulties managing their income to meet up with daily financial needs. The study centered on a sample of participants who willingly volunteered to participate in learning to improve their financial well-being, Taking into consideration the community of study, the sample size of 201participants should be close to an adequate representation of the community that is estimated to have a population of 450 reported limited income households. The sample size used in this study is based on a 95% confidence interval and a 5% margin of error (Singh, & Masuku, 2014).

Although the participants were well informed about the importance of income only very few of them were flexible in thinking that besides wages or salaries income received for working from an employer and welfare benefits (transfer payments), there are other sources of income such as business income (profit) and investment income (interest) that are other legitimate income sources. Additionally, there was a minimal understanding of some basic financial connections between income, consumer spending, and savings, and this was missing in their money management discussions. The linear relationship (income = spending + saving) also helps to explain why some of the economic factors in the regression relationship have a negative beta value. This also indicates that besides income, the dependent variable, in this case, is almost always positive and every other factor affecting this relation can assume a negative or a positive value depending on how income is allocated and managed. The lack of familiarity with this relationship among most participants were not surprising to the educator, this author because these are discussions (basic linear connections between income, consumer spending, and savings) that are deeply rooted in the study of basic economics, but not in basic financial literacy. Most educators believe that every educator can teach financial literacy (which could be true), but because financial literacy is rooted in economics, not every educator can teach financial literacy better than educators grounded in the study of economics. Although the learning of basic economics and financial literacy has no statistical significance in forming households to become consumption spending experts, learning brings the awareness of other economic factors that are significant in enhancing a household master the maximization of household income by minimizing consumption spending (Case, & Fair, 2007). This learning is incorporated in the discussion of this study in the statistical analysis and the effects of the explanatory or predictor variables on the dependent variable.

It is equally important to mention the satisfaction derived by participants participating in the study. This satisfaction derived is indicated on the teaching effectiveness feedback form which is the participants' evaluation of the teacher and the classes. The teaching effectiveness feedback form is for the teacher, and it is not a part of the pre and post-survey forms that capture participants' information. From the teaching effectiveness form, 95% of the participants find the classes essential, especially for almost every head of the household to participate and learn from the classes. It was also inferred from the feedback by participants that the basic economics classes generally make sense and provide pertinent knowledge. Therefore, even if the basic economic knowledge may not be needed at the time of learning by some participants, a repertoire of financial knowledge is always helpful.

Conclusion

In this paper, it is discussed that the amount of income available to a household is a major determinant of household consumption spending disparities. However, other essential factors such as the accumulated wealth of the household, the price of products the household consumes, and the tastes and preferences of the household are contributors to the disparities in household consumption spending. These factors can enable the household

towards two directions: first, effective money management and prudent consumption spending, and second, the lack of the factors can bring households to financial ignorance leading to spending money and not knowing the reasons for the spending (spontaneous spending).

Although economics and financial management education by itself does not contribute much to defining how effective a household can benefit from community education in maximizing household incomes, when combine with other economic factors, it helps a household develop confidence in making appropriate and significant financial decisions. Households that participated in the study indicated that the classes accounted for simplifying the understanding of the independent variables or the explanatory variable (AHAW, PPHC, TPH, and EF-ED) to be helpful to household financial decision-making. This implied that new knowledge was acquired from attending the basic economics classes, and this new knowledge if applied appropriately, could make a positive difference in household income disparities. Bringing the focus back to EF-ED, the significant level is 7% and just 2% over the 5% threshold value. Although this does not refute the fact that the p-value is greater than the alpha ($P > 0.05$), and the probability that the null hypothesis is true, it need not be convincing that with all the explanatory variables combined, the EF-ED contributes significantly to the regression model. Therefore, community education matters in the overall progression of improving household income disparities by closing pockets of potential poverty gaps.

Additionally, learning basic economics and financial education motivates responsible citizens to become less dependent on welfare, and most likely propel a reduction in public assistance dependency, which is impactful to the household well-being, community prosperity, and also, caseload management and recidivism.

Interestingly, a learning community of limited-income households can become creative with applied economics and financial education to become job creators, and business formation to develop business income (profit) that could eventually employ others in the community.

Conclusively, adult continuing community education is an essential enhancement in the community and its affordability, that is almost free all the time, and even when there is a fee, the fee is minimal and affordable. Even more encouraging, some institutions will provide free community education, especially state educational institutions with a College of Agriculture and Natural Resources. Most colleges of agriculture in the United States are affiliated with the United States Department of Agriculture (USDA) which provides funding to the colleges to promote and encourage Extension Education and Programs to provide education to both rural and urban residents. Agriculture Extension education ranges from agriculture (rural and urban) to family consumer sciences (financial management, expanded food and nutrition) to 4-H youth development. As an extension educator, this University Extension educator provides financial management education to adults and youth in his assigned counties and cities at no cost to individuals and families requesting financial management or financial literacy education. This programming is based on the university policy of affirmative action, equal access, and equal opportunity, and incorporates diversity, equity, inclusion, and respect for all participants.

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