SOCIAL STUDIES TEACHING II

Thinking on Social Studies within the Framework of 21st Century Skills

Editors
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FOREWORD

Consisting of 10 chapters, this book covers important topics in order to contribute to the field.

In the first chapter; Tünkler stated that requirements of 21st century skills instruction. Then he notes that about the integration of these skills into social studies. Finally, he mentioned that the impact of high-stake testing on social studies marginalization could be minimized by restructuring social studies curricula and classrooms from a 21st century skills perspective.

In the second chapter; In this study, in relation to 21st century skill frameworks, the first chapter discusses the key disciplines of economics, geography, history, and government and citizenship. In the second part, interdisciplinary areas such as global awareness, civic literacy, environmental literacy, environmental literacy and financial, economic, business - entrepreneurial literacy are examined in relation to these frameworks. Original ideas and evaluation related to the field are also included.

In the third chapter; information about critical thinking and problem solving, which are 21st century skills, is given. Critical thinking and problem solving skills were discussed in their own contexts and their relationship with the Social Studies course was examined and the importance of these skills was mentioned in the Social Studies Curriculum updated in 2018. At the end of the chapter, examples of activities prepared in order to develop students' critical thinking and problem solving skills in the Social Studies course are given.

In the fourth chapter; creativity and innovation skills are analyzed. In this context, it starts by focusing on the concepts of creativity and innovation independently. Then, creativity and innovation skills are examined within the scope of the P21 Framework. The focus of the chapter is to relate creativity and innovation skills to the social studies course. For this purpose, the relevant skill was analyzed in the social studies curriculum. Deficiencies were highlighted by including studies in the literature. In the last part, an application example related to creativity and innovation skills at the-seventh grade level of the social studies course was included. While designing the application example, the literature was taken as a basis and in this context, methods such as cooperative learning were utilized.

In the fifth chapter; information about communication, which is one of the 21st century skills that individuals should have in their business life and social life, which is important to gain in their education life, is given. A general content such as the definition, types and characteristics of communication skills is presented. In addition, the importance of communication skills in the social studies course and the social studies course curriculum updated in 2018 was

examined. At the end of the chapter, there is an activity to improve communication skills in the social studies course.

In the sixth chapter; collaboration skill, one of the 21st century skills, is explained. In this context, the relationship of collaboration skill with the social studies course, its importance and the methods of gaining it to individuals are mentioned.

In the seventh chapter; This chapter is about the history of media literacy as separate field of study in communications and emphasizes the integration of media literacy in social studies curriculum. It highlights the key figures and organizations in the development of media literacy. The chapter also explores the challenges faced in incorporating media literacy in social studies, such as lack of resources and the need for teacher training. In addition, the chapter delves into the specific context of media literacy education in Turkey. The chapter concludes by providing a sample activity that can be used as guideline for middle school students.

In the eighth chapter; In this section, we will try to explain the concepts of information, communication and technology (ICT) literacy. The concepts will be discussed in the context of the 21st century skills framework. Finally, an activity sample for the social studies course will be presented.

In the ninth chapter; From the very first day of their lives, human beings try to adapt to the new environment they start living. The more they get aged, the more they experience new environments. Considering those environments, some are created in a planned and programmed way whereas some occur naturally. Nevertheless, fundamentally speaking, planned teaching environments are created in education and training practices. While classrooms were traditionally used as educational environments, of late, more various areas are being used as learning environments in which students gain life experience. To illustrate, a lot of areas both inside and outside the school can be used as teaching environments. In this study, the learning environments that can be used for the education of individuals in the 21st century have been examined.

In the tenth chapter; assessing 21st century skills involves evaluating students' proficiency in key areas such as critical thinking, creativity, collaboration, communication, and digital literacy. it's essential to align assessment strategies with the specific goals and learning outcomes of your curriculum. Additionally, providing constructive feedback and opportunities for improvement is crucial for fostering continuous growth in 21st-century skills.

EDITORS

VURAL TÜNKLER & ÖZKAN AKMAN

CHAPTER 1: 21ST CENTURY SKILLS AND SOCIAL STUDIES EDUCATION

Assoc. Prof. Dr. Vural TÜNKLER

Introduction

Focusing on student needs and setting a diversified educational goal to provide a more effective and purposeful education has been an ongoing effort for many years (Kaufman, 2013). While the emphasis since the beginning of public education has been on teaching basic skills such as reading, writing and mathematics, the goal nowadays is to equip individuals with 21st century skills, including technological expertise, innovative and creative thinking, communication and collaboration, and problem-solving skills (Larson, & Miller, 2011). The term 21st century skills has received a lot of attention in the educational literature over the last decade. These skills basically emphasize not what units of knowledge students possess, but what they can do with this knowledge (Silva, 2009).

These skills that students need to succeed in the 21st century are not new. For example, critical thinking and problem solving were instrumental in the development of the first tools, agricultural advances, geographical discoveries, and the invention of vaccines. Information literacy and global awareness skills were common among an elite in different societies (Rotherham, & Willingham, 2010, p. 17). Later on, with the dizzying changes in information and communication technology, skills have been sought in the qualities that every individual should possess (Acikgoz, & Akman, 2023; Akman, 2022).

Some researchers have focused on the use of technology for communication and collaboration, while others have focused on digital literacy, visual literacy, or other content-related components such as financial literacy and global understanding (Donovan, Green, & Mason, 2014). Despite the differences in skillsets, Larson and Miller (2011) emphasized that they all generally express what students can do with knowledge and how to apply what they have learned in authentic contexts. Examining the frameworks of the North Central Regional Education Laboratory (NCREL) and the Metiri Group (2003), the Organisation for Economic Co-operation and Development (OECD, 2005), the National Leadersip Council for Liberal Education and America's Promise (LEAP, 2007), and the Partnership for 21st Century Skills

(P21) (2007), Dede (2010) found that the frameworks are generally consistent with each other. This chapter focuses on the integration of 21st century skills into the social studies curriculum. Since other parts of the book deal with 21st century skills frameworks (especially the P21 skills framework, which is the basis of the book), this chapter does not go into detail.

21st Century Skills

The 21st century differs from the 20th century in terms of the skills people need for work, citizenship and self-actualization. For example, with the emergence and development of information and communication technologies, the types of work (as opposed to the work done by machines) have been changing (Dede, 2010). Brainpower has replaced brawnpower and horsepower has been replaced by hertzpower. Achieving educational goals is made possible by powerful technologies through which we communicate, collaborate and learn (Trilling, & Fadel, 2009, pp. 15-16).

In a world where access to information is becoming easier, the ability of individuals to be successful and well-equipped members of the 21st century society depends on their ability to manage and make sense of large amounts of data and to be creative thinkers to solve complex problems (Drake, & Reid, 2018). Education has a great role in this regard. According to Trilling and Fadel (2009, pp. 16-18), education in the 21st century has four universal goals: (a) Contributing to work and society, (b) Fulfilling personal talents, (c) Fulfilling civic responsibilities, and (d) Carrying forward traditions and values. To contribute to 21st century society, a portfolio of innovation, technology and career skills necessary for work and life must be mastered. The possibilities of digital devices and internet technologies should be utilized in the development of personal skills, conscious participation in democratic decision-making processes and, moreover, a collective role in solving today's problems (global warming, pandemics, hunger and poverty, etc.). Therefore, it is important to remember that only education can ensure that every child is aware of and ready for challenges (Trilling, & Fadel, 2009).

The success of the 21st century skills initiative depends on improvements/adjustments to the curriculum and teaching activities. For most education systems transitioning from the 20th century education model to the 21st century, the balance can be explained by the equal 50 percent ratio between traditional and direct methods of instruction and active teaching methods, such as inquiry and collaborative learning projects (Trilling, & Fadel, 2009; see Figure 1).

Teacher-directed	Learner-centered
Direct instruction	Interactive exchange
Knowledge	Skills
Content	Process
Basic skills	Applied skills
Facts and principles	Questions and problems
Theory	Practice
Curriculum	Projects
Time-slotted	On-demand
One-size-fits-all	Personalized
Competitive	Collaborative
Classroom	Global community
Text-based	Web-based
Summative tests	Formative evaluations
Learning for school	Learning for life

Figure 1. 21st century learning balance (Trilling, & Fadel, 2009, p. 38)

21st Century Skill Definitions

It has already been mentioned that many organizations have attempted to define 21st century skills. NCREL and the Metire Group (2003) included digital-age literacy, inventive thinking, effective communication, and high productivity in their list of skills; OECD (2005) included skills such as use tools interactively (use language, symbols and texts interactively; use knowledge and information interactively; use technology interactively), interact in heterogeneous groups (relate well to others; co-operate, work in teams; manage and resolve conflicts), and act autonomously (act within the big picture; form and conduct life plans and personal projects; defend and assert rights, interests, limits and needs). In the framework developed by LEAP (2007) to prepare students for the challenges of the 21st century, skills are presented under the theme of "Intellectual and Practical Skills" (critical and creative thinking, information literacy, teamwork and problem solving etc.). P21's (2007) conceptualization of 21st century skills is more detailed and more widely adopted than the frameworks put forward by other initiatives (Dede, 2010).

Social Studies: Integrating P21 Skills into the Curriculum

Social studies plays a major role in providing students with knowledge, skills and values at all levels of education, starting from early childhood period. For example, social studies in early

childhood is characterized by activities that facilitate children to decide together which imaginary roles to play in the jungle gym, which structure to build with blocks, and how to interact with someone in a wheelchair. At the primary level, its role in fostering respect for classmates from different cultural backgrounds through cooperative learning groups becomes even more prominent (Mindes, 2014).

Seeking to make sense of others, places and events that are part of our experiences, social studies helps students learn how to critically evaluate sources of information, tolerate different views and resolve differences of opinion, based on real-world practices (Lee, 2008). It also encourages thinking and acting like a social scientist (Brophy, 1990), exploring the issues surrounding society, weighing and weighing evidence before reaching conclusions, and fulfilling civic duties and responsibilities (Cole, 1940). The National Council for the Social Studies (NCSS, 1994), which has guided developments in social studies in the United States and shed light on social studies curriculum studies in Turkey, defined social studies as a discipline that integrates the knowledge, skills and attitudes necessary to develop individuals' civic competence. It also described social studies as an important component of the school curriculum to prepare children to understand the world in which they live and to participate effectively in decision-making processes (NCSS, 2017).

As much as any curriculum program, social studies strives to achieve the goal of equipping individuals with the necessary knowledge, skills and values about the world as well as preparing them to contribute as members of the community (Patton, Polloway, & Cronin, 1987). Social studies, which undertakes the responsibility of planning and implementing developmental teaching activities for the fulfillment of civic duties in a participatory democracy (Bailey, Shaw, & Hollifield, 2006), is an interdisciplinary course that teaches the content of social sciences such as history, geography, economics, and political science (Farris, 2015; Solomon, 1987). Social studies, which provides the opportunity to develop understanding about the peoples and cultures of the world by associating past topics with today's problems (Flouris, 1988), has rich opportunities for students to become more competent as thinkers (Solomon, 1987). Indeed, identifying thinking skills among the goals of social studies (Russell, Waters, & Turner, 2014) encourages higher-order thinking when interpreting, analyzing, classifying, and relating social studies knowledge (Farris, 2015).

In the NCSS yearbook of 1963, Jarolimek (1963, as cited in Petrini, 1988) categorized social studies skills as three headings: Work study skills (reading. outlining, map-reading), thinking skills (critical thinking, problem solving), and social skills (cooperating with others, group

work). By the 1994s, NCSS had listed a set of skills in the social studies curriculum standards, but in 2010 it updated them to help students succeed in a changing world. In this framework, literacy skills, inquiry and critical thinking, communication, data analysis, and careful use of 21st century media and technology were emphasized (NCSS, 2010).

The growing consensus on elementary students' ability to adapt to change has made it necessary for social studies to have a "global focus that emphasizes the interconnectedness of people sharing the same planet". The Partnership for 21st Century Skills, a collaboration between business leaders, educators and policy makers, has pioneered a comprehensive set of 21st century skills (Zarrillo, 2012). The skills set consists of the categories "Learning and Innovation Skills", "Information, Media and Technology Skills" and "Life and Career Skills" (Partnership for 21st Century Learning [P21], 2007). Please see Figure 2, which includes student views on Learning and Innovation Skills (4Cs) from these categories.

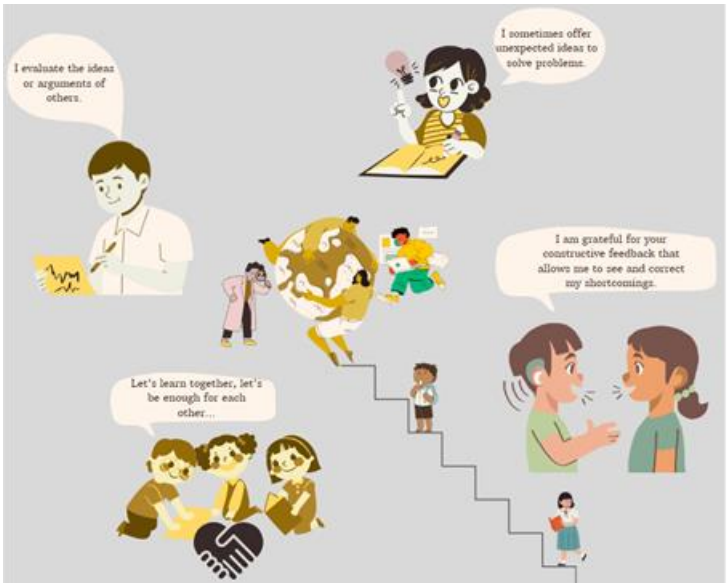

Figure 2. 4Cs: A way to prepare students for the global world

How are 21st Century Skills Integrated Across Curriculum?

The curriculum is a guide for learning and focuses on the knowledge and skills that are considered to be learned. Instruction is the means by which learning takes place (Kay, & Greenhill, 2011). Intentionally integrating 21st century skills into the curriculum will allow to achieve many of the challenging goals that educators have been trying to achieve for years. Kay (2009) suggests that these skills (i.e. intelligent reasoning, practical skills), which will play a role in students' achieving high levels of success and learning in basic courses, should be integrated with content knowledge. According to Larson and Miller (2011), the way to

incorporate 21st century skills into the curriculum is through communication and collaboration, expertise in technology, innovative thinking and problem solving.

Since there is no one best approach to teaching 21st century skills and a strong emphasis on the development of these skills, each school must determine the approach that makes the most sense given its current circumstances. In doing so, the most important premise is to go beyond the content knowledge of its curriculum (Kay, & Greenhill, 2011). In other words, the curriculum should cover not only the basic content knowledge of 21st century skills but also the competencies to use 21st century tools (Pearlman, 2010). Innately, the question "Which pedagogy, curricula, activities and learning environments support 21st century learning?" inevitably arises. Some of the possible answers to this question could be as follows (Pearlman, 2010):

> Classrooms should be equipped not with individual student desks, but with desks and wheelchairs suitable for teamwork. Schools should have workshops and laboratories. Students should be on the job and active, using information and communication technology (ICT), computers and the Internet effectively to become researchers and knowledge producers. The curriculum should encourage collaborative group work, project-based learning activities and accompanying authentic assessments.

Teachers, who are primarily responsible for the success of teaching and learning, are an important source of support in shaping teaching in the light of the 21st century skills movement. Teaching 21st century skills is essential and should be seen by teachers as part of the curriculum, not as an additional "subject" or "one more thing to teach" (Larson, & Miller, 2011). Teachers are at the forefront of the skills movement, providing expertise and guidance to students as well as acting as facilitators and coach. Moreover, they produce interesting projects that challenge their students' interests and skill levels, and communicate and collaborate with experienced teachers and experts to evaluate their students' project results (Trilling, & Fadel, 2009).

NCSS began coordinating with the Partnership in 2007 to integrate 21st century skills into the social studies curriculum. As a result, the "Social Studies 21st Century Skills Map" that intersects 21st century skills and social studies has emerged (Partnership for 21st Century Skills & NCSS, 2008; Yell, & Box, 2008; Zarrillo, 2012). This map provides learning outcomes and experiences to prepare students for future challenges in social studies classrooms and provides

educators with concrete examples of how to integrate skills into social studies classrooms (Yell, & Box, 2008; Zarrillo, 2012).

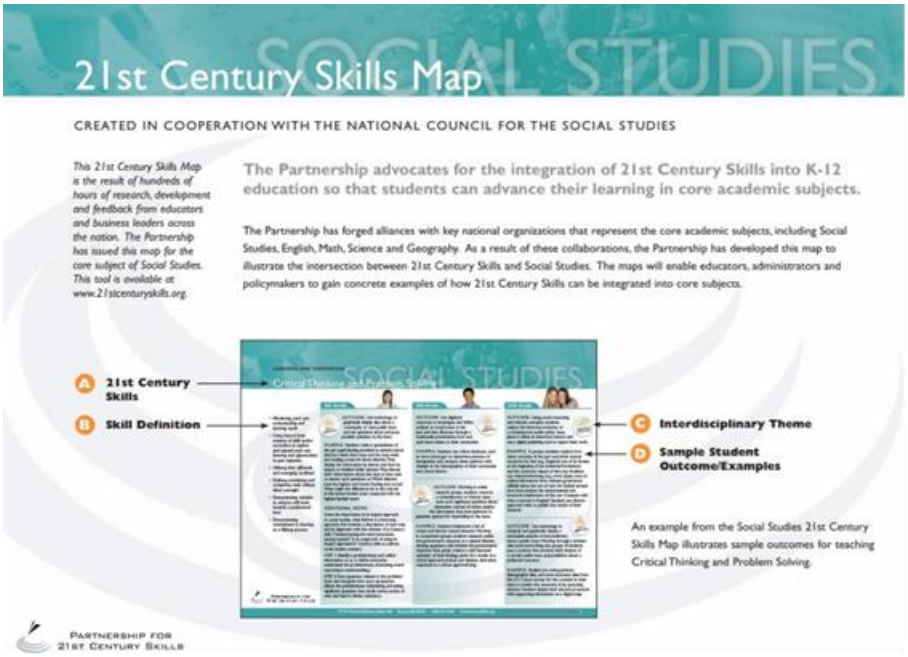

Figure 3. An example from te social studies 21st century skills map (Partnership for 21st Century Skills & NCSS, 2008)

Figure 3 shows sample outcomes of Critical Thinking and Problem Solving sub-skills in the Learning and Innovation Skills category. When the map is examined, it is seen that skill definitions are made at the 4th, 8th and 12th grade levels, learning outcomes to be observed in the interdisciplinary themes (civic literacy, financial literacy) and key subjects referenced in the activity examples are shown. For example, in the 8th grade learning activity, students were expected to identify patterns of immigration through the proposed online database and compare the patterns with the changes in demographics in their communities and school districts (Partnership for 21st Century Skills & NCSS, 2008). For the integration of skills in social studies, Larson and Miller (2011) presented Google Earth (virtual globe) as a resource for exploring the rich nature of geography by traveling anywhere in the world, and the History Channel as a resource for accessing a large number of documentaries, biographies, interviews and information about a historical period.

Conclusion

In order to ensure that today's students are sensitive to complex world problems and try to find solutions, it is very important to integrate social studies content (i.e. history, geography and

citizenship) with the 21st century themes (global awareness, civic literacy, environmental literacy, etc.) put forward by P21 (2007). The power of social studies, which can act as a lever in the realization of 21st century skills, actually depends on the transfer of content with an interdisciplinary approach and integrated with technology (NCSS, 2002). In this context, it can be said that 21st century skills and social studies feed each other.

The continuing marginalization of social studies on an international scale should be seen as a major problem. Social studies should be a vital part of the primary curriculum so that individuals can be active and take responsibility in a democratic society and develop citizenship skills to deal with global challenges (NCSS, 2017). However, the situation of social studies is not as expected: Social studies is losing value day by day. Studies have proved that social studies is not perceived as an important/valuable subject (Fitchett, & Heafner, 2010; Hubbard, 2013; Leming, Ellington, & Schug, 2006; Rock et al., 2006; Russell, 2009; Schug, Todd, & Beery, 1982; Tünkler, 2022; VanFossen, 2005). According to the results of the study, high-stake testing policies had a major impact on this. The lack or absence of assessments for social studies resulted in the course having a lower priority than other subjects such as reading, mathematics and science, which naturally led to a reduction in the time allocated for teaching. However, social studies is as fundamental to success as reading, math and science (NCSS, 2017). It should not be the first course to be removed from the school curriculum or a holding spot for other courses (Holcomb, Beal, & Lee, 2011), as it provides students with skills that will be important in their future lives (Schug et al., 1982). In order to get the recognition they deserve, social studies educators should see 21st century skills as an opportunity to integrate them into the curriculum and design instructional activities to include them.

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CHAPTER 2: KEY SUBJECTS AND 21ST CENTURY INTERDISCIPLINARY THEMES

Assoc. Prof. Dr. Muzaffer ÇATAK

Asst. Prof. Dr. Yusuf YILDIRIM

Introduction

The 21st century has caused many changes in the educational process. Although these changes were observed in the understanding of education at first, they started to deeply affect the entire education system in the process. These changes have enabled new concepts (literacy, competence, qualification, etc.) to be included in the education process over time, and have created an environment for the concepts that have been used for centuries (history, geography, economy, etc.) to gain different meanings. Literacy related to these concepts, which have an interdisciplinary structure, has also been among the indispensables of the curriculum.

Literacy is one of the basic elements of today's education process. In particular, situations such as structuring knowledge-based education, using it effectively and transferring it to daily life have made literacies among the important outputs of contemporary education. This situation has affected all disciplines as well as Social Studies Curriculum in Turkey. The literacy programs, which were included in the 2005 Social Studies Program for the first time, developed and existed in the 2015 and 2018 Social Studies Curriculum.

Until the 19th century, literacy was perceived as performing reading and writing skills, using writing symbols and deciphering their meanings (Uzun & Çelik, 2020). By combining the acts of reading and writing, literacy has moved beyond its classical meaning and has become more than just the act of reading and writing. As a matter of fact, the meaning and scope of the concept of literacy has expanded over time in line with the purposes of the 21st century.

UNESCO (2006) defined the concept of literacy as being knowledgeable and educated in a certain field in addition to meeting literacy skills. When we examine the concept of literacy, it can be defined as the perception and understanding of the life lived by the person and the objects and events in this life, accompanied by the activity of reading and writing, and attributing meaning to all relations in social life (Aşıcı, 2019). Altun (2005), on the other hand, explained literacy as understanding objects, facts and events in more detail and expressing what they understand in a unique way. Literacy is the ability of the individual to create their knowledge

based on their experiences, to make sense of objects, events and phenomena based on the information they create; It can be defined as using it effectively and producing content for the relevant subject.

Over time, the types of literacy began to diversify. Information literacy, media literacy, digital literacy, visual literacy, environmental literacy, political literacy, and cultural literacy are the most common types of literacy (Uzun & Çelik, 2020). It is seen that different literacies for each discipline take their place in the education system day by day. This situation is especially related to social sciences and social studies. Because literacy has started to come to the fore for interdisciplinary fields such as history, geography, law and economics, which have been indispensable courses in the curriculum for centuries.

B.1. Key Subjects

B.1.1 Economics

Economy, which is a French (économie) word, is defined by the Turkish Language Association (TLA) (2023) as "*The whole of the ways people produce in order to live, to divide what they produce, and the relations arising from these activities; economics*." is defined as. As a branch of science, economics emphasizes the efforts of individuals to manage their unlimited needs with existing and limited resources (Kahya & İmamoğlu, 2015). Economics is one of the oldest branches of science in human history.

Economy has been at the center of human life since the first people to the present day Economy has always had an important position in every society and in every field where there is economic activity. Economic activities that developed and changed over time included hunting-gathering for the first humans; agriculture and animal husbandry for the first civilizations; Production based on trade and industry has taken place in human life in the form of economy. From the simple exchange economy to the developing banking system, finance has always maintained its importance (Yalçınkaya & Er, 2018). With the 21st century, it should not be forgotten that the economy has a serious place in individual and social life. Accordingly, individuals are expected to gain some competencies for economic life during the education process.

In the 21st century world, individuals need to have some competencies in economics in order to catch up with economic developments and adapt to the understanding of production. In particular, the global economic structure formed within the globalizing world structure has

made it necessary for individuals to be economically equipped. Countries that want to keep up with global financial competition should follow innovations related to financial issues and adapt these innovations to their economies (Bozkurt, Toktaş & Altıner, 2019). In this case, it has become a necessity to raise economically equipped individuals.

When we look at the definitions related to education, it is seen that it is associated with the economy. It is among the objectives of education that the individual acquires a profession and raises entrepreneurial and well-equipped individuals who will meet the needs of the society. In the global economic order, individuals have become even more important for states. By increasing the financial knowledge level of the young population, it is aimed to increase both resource use efficiency and economic development (Yıldırım & Özbek, 2021). In addition, financial issues are considered as an area that not only policy makers or economists, but also households should be sensitive to (Bozkurt, Toktaş & Altıner, 2019). Therefore, the educational process directly or indirectly serves to achieve economic goals. Accordingly, although the economy continues to be one of the most important concepts in the 21st century, its importance is increasing day by day.

B.1.2. History

The past has always been wondered by people. This curiosity and related to the past led to the birth of the science of history. In addition, people who want to learn from the events of the past and shape the future have increased the interest in the science of history. However, the debates on history have taken their place on the agenda in the past as well as today.

Herodotus is one of the people who made history a science. The tradition of Western historiography, Herodotus (4th century BC) and Thucydides (4th century BC) to ancient Greece; It also extends to the Roman Empire with Livius, Tacitus and Plutarch (Merey, 2010). This has raised the question of what is the science of history? Different definitions have been made in this regard. Some of these definitions are as follows.

The word "history" or "historia", which is the equivalent of the concept of history in today's Western languages, comes from ancient Greek and has the meaning of "research" and "search for the truth" (Dinç, 2010). The Turkish Language Association (2023) defines the science of history as "*the science that arises from movements that affect societies, nations and organizations, describes events by showing time and place, examines the relations between these events, their connections with previous and subsequent events, mutual influences, and the*

civilization established by each nation." Carr (1987) explained history as "an uninterrupted dialogue between the present and the past".

History is expressed in two different ways: what happened in the past (res gastae) and a field of science that examines the past (historia re rum gestarum) (Şimşek & Pamuk, 2010). Tosh (2000) defines the first of these two definitions as a design of the past, which is imagined as events and situations that took place in the past; the second is explained as a design of the past that historians try to reveal by examining the remains and evidence from the past (Dinç, 2010). It is said that history, as a science, emerged by taking notes of what happened to people. History focuses on the past. Keçe (2015) stated that it is unthinkable not to mention the word "past" in a sentence about history. History is in close contact with the past, but it is not right to reduce it only to the past, past experiences, past lives.

History is not far from life, it is in life. As a matter of fact, Safran (2010) stated that history is "*in the library, in the archive, in any history book itself, in historical remains or documents, in our minds, wherever the past affects the present, wherever the present expects confirmation, assurance, verification or support from the past*". In this context, history not only examines the past, but also focuses on the effect of the past on the present. It is as much about the present as it is about the past. It is contrary to the spirit of historical science to limit history only to the past. Şimşek (2015) emphasized that history is rewritten in every period and that it remains up-to-date.

The science of history has a great place in making sense of the events in the world in the 21st century. Because history contributes to the establishment of a link between the past, present and future by mediating the evaluation of the past from a current perspective. From this point of view, although we do not consider history separately from the past, it is necessary to state that it is not just the past. As a matter of fact, people cannot witness historical events because history has been lived and finished (Ata & Keçe, 2014). However, the science of history allows individuals to gain historical thinking skills, to make sense of the past, to interpret its impact on the present and to make inferences about the future. For this reason, history has an important position in the 21st century as well as in the past.

Although history focuses on the past, it continues to exist by expanding and developing in the 21st century. A good knowledge of history is needed to interpret the basis of the conflicts, crises and conflicts that lead to war between 21st century nations. History and its sub-branches

should be consulted in order to make sense of the social dynamics of individuals, to create and maintain national consciousness, to ensure national integrity and to analyze universal culture.

B.1.3. Geography

Geography refers to the space that surrounds people and forms their living space. TLA (2023) explained geography spatially as "*all of the physical, economic, human, political realities that determine and characterize a part of the earth, a region, a country*". The origin of the term geography is based on the ancient Greek words "geo" and "graphein" (Baydil, 2008), which mean the description of the place. People have wondered about the environmental factors that affect their lives and have started to examine them. This led to the birth of the science of geography.

Geography, which is one of the basic disciplines of social sciences and social studies, focuses on the relationship between environment/space and people. According to Karakuyu (2010), geography deals with the activities of individuals, especially those related to space. Similarly, Değirmenci and İlter (2013) stated that at the center of the science of geography is the center of the world and the universe, as well as human beings and the place where they live. Geography is the science that examines the human-space relationship, the distribution of natural and human phenomena within the framework of the principle of causality (Ünlü, 2014). As a matter of fact, TLA (2023) defined it as "*The science that examines the earth in physical, economic, human, and political aspects*." Doğanay (1993), on the other hand, expressed geography as a branch of science that examines the natural, human and economic events on earth, the distribution of these events and the reasons for these distributions by dealing with human beings.

Geography enables individuals to get to know the earth. According to Baydil (2008), geography literally means the description of the place in ancient Greek. One of the most distinctive features of the science of geography is that it frequently uses concepts to introduce and explain geographical phenomena and events on earth (Barth & Demirtaş, 1997). Geography contributes to the effective use of concepts, skills, literacy and values in order to create a perception of the earth and to interpret the effect of the earth.

Geography as a science is a bridge between science and social sciences. It tries to reveal the effects of social events by explaining the events that occur on earth from a causality perspective. It examines the interactions between the natural environment on earth and humans, their causes and consequences, sometimes as a whole and sometimes as separate subjects, and compares and scientifically explains their distribution (Elibüyük, 2000). The real subject of geography is

the earth and examines the distribution, connections, causes and consequences of physical, human and economic events on this earth (Değirmenci & İlter, 2013).

Geography and the phenomena that have become the subject of geographical science have a significant impact on human beings. Since geography has serious effects on human life, there is an acceptance that "geography is the destiny of man". Geography is expressed as one of the most basic sciences in the understanding of the events that take place between man and nature, and in the development of policies, strategies and practices regarding the causes and consequences of these events (Kaya, Artvinli & Dönmez, 2023). Individuals and states make future planning by taking into account the data of geography such as population, climate, disasters, landforms.

The science of geography has an important position in the 21st century as it was important in the past. In particular, rapid population growth, changes in economic activities and environmental problems due to climate change have a serious impact on human life, which has shown that the geography used as a living center should be looked at from a scientific perspective. In fact, it is tried to gain some skills, values and attitudes through geography curriculum to individuals in the education process when environmental problems reach serious levels. With a qualified geography education, problems such as climate change and global warming, which threaten the whole world as a result of globalization; It can be ensured that cadres who can carry out political, social and economic studies that may threaten the security, health, peace and peace of humanity can be trained (Kaya, Artvinli & Dönmez, 2023).

B.1.4. Goverment and Civics

The fact that people started to live in communities led to the emergence of an understanding of management among them. It is thought that the first state organization emerged in the form of a structuring undertaken with the intention of protecting both life and property for security purposes against the invasion and plunder of some armed nomadic-herding communities (Hall & Ikenberry, 2005). In this case, over time, it caused society to be divided into those who ruled and those who were ruled. In the historical process, different state systems have been established depending on different management systems.

The word "state", which has existed from the past to the present; The ancient Greeks called it "polis", which means city-state, the Romans called it "civitas" and "res publica", the British called it "state", the French called it "etat", the Italian called it "stato", and the Germans called it "staat". The word state is defined by TLA (2023) as "A legal entity formed by a politically

organized nation or community of nations based on its territorial integrity; country." The state abstractly through norms, laws, judicial decisions and various symbols; concretely, it is possible to define it as vehicles, buildings and the civil servants working in them (Sıdal, 2019).

The state appears as an unnatural, artificial organization that is relatively new and invented in terms of human history (Hall & Ikenberry, 2005). The origin of the state is defined on the basis of the people's inability to be self-sufficient and their need for social life (Baygül, 2021). The state is among the indispensables of individual life. Individuals are constantly dealing with the state and state institutions in daily life.

There has been a change in the understanding of the state over time. The state of the modern period represents a hierarchical structure organized according to certain rules of law (Troper, 2005). Within the scope of the modern understanding of the state, citizenship rights and the concept of citizen have emerged. Citizen took on a political meaning with the French Revolution of 1789. As a result of many years of struggle, people have gained the status of citizens (Yıldırım, 2019). For those who gained citizenship through struggle, citizenship was accepted as a virtue, not a right (Rousseau, 1762).

The fact that the concept of citizenship has a meaning in the state has brought citizenship education to the agenda over time. Citizenship education has become a necessity for individuals to learn their rights and responsibilities. This is because citizenship requires being a part of a society, having rights as an individual, as well as obligations as a member of the community (Lawson, 2001). Lawson (2001) also focuses on the relationship between the individual and the state.

Historically, citizenship education dates back to the emergence of the first concept of "citizen", starting with the ancient Greek and Roman city-states. Especially with the French Revolution, citizenship education has become widespread in parallel with the citizenship status. Definitions of citizenship education can be compiled under three headings: "education about citizenship", "education through citizenship" and "education for citizenship" (Kerr, 1999). The review by Kerr (1999) can be explained as follows. Civic education emphasizes the creation of adequate knowledge and understanding of national history, the structure and processes of the state and political life. Education through citizenship is the sum of learning processes by doing and living based on active participation in school or in the environment. Education for citizenship, on the other hand, aims to enable students to acquire a set of knowledge that will

enable them to participate effectively in their roles and global responsibilities, to create, develop and reinforce skills and values.

B.2. Interdisciplinary Themes

B.2.1. Global Awareness

For centuries, societies have invaded each other, interacted, traded, and borrowed each other's tools, inventions, modes of production, ideas, beliefs, and practices. From the sixteenth century onwards, European colonization not only accelerated, but gave them a new depth and model. European powers permeated and shaped the lives of colonized societies on many levels. They turned them into dependent economies. Thus, developing countries are in dire need of capital, technology, and markets of developed western countries, and in return, they also need cheap labor and markets. International organizations such as the UN, IMF, World Bank, GATT and WTO have ensured that global interdependence is institutionalized, monitored and directed along certain lines. As a result of all this, the destinies of societies that are thousands of kilometers away from each other and are in very different stages of development are increasingly intertwined. These societies share common interests, face common problems, and need to find collectively acceptable solutions. Globalization is not limited to economics and extends to other areas of life, such as political, cultural, and moral (Parekh, 2004, p. 129-130). According to Nyang (1998), globalization manifests itself in five important ways. The first is that with the development of technology, the geographical distance is shortened. The second is the increase in communication with technological development. The third is the emergence of a new world culture with the search effect of English as a common language. Fourth, scientific and technological concepts are adopted and become the common heritage of the world. Fifth, the nuclear threat that has developed as a result of the advancement of military power, the danger of destroying societies, has made people dependent on cooperation for peace. Speaking of wars, it is the end of 2023 from the past to the present, and the wars are still raging. There is no respect and love for people, beliefs, ethnicity and cultures in wars. If the scope of 21st century skill frameworks in the content of global awareness had been taken seriously all over the world and reflected in real life through education, no country or leader would have been able to ignore a world public opinion where "humanity and conscience" were at the forefront. In these respects, providing students with this awareness is of vital positive importance for current and future generations.

Another issue raised by globalization is the impact of these new technologies on local cultures around the world. With globalization, they produce new technologies, good things that

make the good life good, and market them worldwide. Globalized structures of desire that develop over time; People from one end of the world to the other desire to watch the same movies, visit the same websites, and enjoy the same branded clothes, music and lifestyles. One of the dominant discourses in globalization research is the “cultural homogeneity” hypothesis. It predicts that global change processes enabled by new information and media technologies will inevitably lead to a more homogeneous world culture. Will the next generation be world citizens who eat burgers at the major brand, drink coffee, and use a globalized English to communicate with each other online? If this is the case, diversity in youth cultures and experiences may disappear (Suarez-Orozco & Qin-Hilliard, 2004, p.24). The native tongue element is important for the life of a nation; However, with globalization, English is brought to the fore as a "global language". It is observed that the effort to establish a global language is especially focused on children and young people (Kolaç, 2013). In this and similar ways, there are scientists who express the damage that globalization has caused or will cause with the native tongue. Contrary to these doubts and concerns, the learning standards of "global awareness", which are evaluated within the framework of the 21st century, which will be gained by students, emphasize respect and importance for mother tongues.

Globalization will continue to be a powerful driver of change. It is necessary to understand well how education will be transformed by globalization and, in turn, how its routes can be shaped and managed. Education should explore how best to prepare children for a global world. There is a need for a better theoretical understanding of many aspects of globalization, such as economic, demographic, social and cultural (Suarez-Orozco & Qin-Hilliard, 2004, p. 28). Veselinovska, Gokik and Veselinovski (2011) state that today's students are in daily contact with people of different ethnic, racial, linguistic and socio-economic backgrounds with a global education system; Therefore, they stated that there is a need for a curriculum that will help students with different worldviews to grasp the concept of globalization and the role of global education, and to help students develop attitudes, knowledge, and skills. In addition, they emphasized the need to develop cross-cultural skills and attitudes so that they can be effective citizens in a pluralistic society full of diversity.

When the Social Studies Curriculum in Turkey is examined, it is aimed to bring global and cultural awareness to students, especially with the learning areas of "Culture and Heritage" and "Global Connections". In the field of learning Cultural Heritage, it is desired to protect and develop culture around national consciousness. In the next stage, it is aimed to provide students with a pragmatic perspective such as enriching and coloring the world cultural heritage as well

as their own culture. In the field of Global Connections learning, it is desired to train students as effective and responsible individuals who can follow the world agenda and produce solutions to global problems. These are by creating global awareness in students; It will make a significant contribution to their use of 21st century skills (MEB, 2018).

B.2.2. Financial, Economic, Business and Entrepreneurial Literacy

Literacy is an important component of education, and entrepreneurial literacy is a must-have competence for anyone who aspires to be an entrepreneur (Januardi, Lestari, & Valianti, 2023). Entrepreneurship is a social and cultural phenomenon. Entrepreneurial qualities gain importance in societies with different socio-cultural characteristics. In the creation of policies and strategies for the development of entrepreneurship; In the development and execution of training, consultancy and information programs, and in taking incentive measures related to entrepreneurship, social characteristics, socio-cultural and local characteristics should be carefully considered. For a successful implementation, local characteristics should be determined and revealed as well as the universal qualities of entrepreneurship (Durukan, 2006). The content of entrepreneurship includes the production of creative and innovative solutions (Ege & İnce, 2020). While students are given entrepreneurial skills, it should not be overlooked that creativity and innovation skills are the basis of this skill. Among some of the features that should be found in the entrepreneur, the individual;

1. to have organizational skills,
2. to evaluate idle or under-capacity resources
3. to taking risks,
4. to evaluate opportunities,
5. to creating value and
6. to be a planner (Odabaşı, 2005).

Financial literacy is the sum of an individual's attitudes, behaviors, knowledge and skills in finance. According to research, people with low financial literacy; It is seen that they have difficulties and anxiety in financial transactions, issues, investment and communication. As the financial literacy level of the individual increases, the individual can determine the options in financial matters, stay away from possible problems and make more effective financial decisions according to the general economic developments. Financial literacy is important directly in the country's economy as well as benefiting individuals (Sarıgül, 2019). Views on the necessity of financial literacy and the level of financial knowledge required, as well as the level required by it, are constantly changing. Like all other specialties, it is constantly evolving.

In parallel with these developments, it is important to follow current economic conditions or changes in terms of financial literacy. The recognition and study of this importance is undoubtedly of interest not only to academics and applied professionals, but also to society as a whole (Kovács & Terták, 2019). Narmaditya and Wibowo (2021) stated in their study that family economics education encourages students' economic literacy and entrepreneurial intentions. In addition, it was emphasized that universities have an important role both in the development of student intention and peer group factors, and in promoting economic and entrepreneurial education in the family environment.

Children also need opportunities to explore mental, emotional images and impressions about life, and support in turning identities related to occupations into reality. The primary purpose of services for children and young people; It should be to enable them to gain competence in a way that maximizes their potential through intelligence, talent, and the best management and development of their environment. In this way, children should gain the competence of developing self-knowledge and interpersonal communication skills, life and career planning. It should also support students in preparing for possible future life roles and arrangements for family, work, education and activities. For this, a student's career is a lifelong process that is open to all kinds of influences, and therefore a conscious, systematic and long period is required for efforts in this regard. Each student should be trained to take responsibility for their own life and career, the necessary information and environmental support should be created for this, and they should be able to benefit from career counseling services. Responsibility for career development and planning should be shared by the school, student, family, counselor and business community. The participation of the business environment and family in the process will enrich educational and career planning efforts (Yaylacı, 2007, p. 123).

B.2.3. Civic Literacy

Active citizenship leads citizens in society to participation. It is based on the services provided by the state and meeting the social needs with the citizens and contributing to the continuity of social life. In accordance with the understanding of the social state, some of the duties that must be fulfilled towards its citizens are transferred to its citizens through effective citizenship. Thus, it tries to ensure the sustainability of the state and social life by reducing the state's own obligations. It is also considered important to have the opportunity to contribute and intervene in political management on many issues with the inclusion of active citizens in community management. While the effective citizen criticizes, solves problems and asks for accountability when necessary on many issues, from the solution of public problems, there is

unconditional obedience and commitment in the traditional understanding of citizenship (Ünal, 2019). From these perspectives, the importance of an active citizenship role to be created through education in order to improve the global structure emerges. When the concept of citizenship is evaluated from various perspectives, three main topics generally emerge. These are: 1- Rights and responsibilities, 2- democratic empowerment and participation, 3- the idea of commitment, belonging, loyalty, and identity (Schattle, 2012).

The aim of the value of democracy in schools should be to bring and maintain democratic values and behaviors in the society. In schools, students should be educated as individuals who are free from all kinds of discrimination and prejudices, who are constructive rather than offensive, who oppose violations of rights, who know how to behave respectfully and tolerantly. Citizenship education is the activities carried out in order to raise the individual as a good person and a good citizen and to process the talents that exist in him. Although this education seems to deal with the individual, it actually targets the society. A culture of democracy should be created in every individual living in the society and this culture should be put into practice (Çiftçi, 2019). Today's educators see the social achievements to be gained by students as valuable as the international achievements.

All over the world, it is desired to raise citizens who are sensitive to injustice and racism, who follow global events, and who can take action for the benefit of all humanity. In short, it is expected to contribute to the solution of many problems encountered at both national and global levels through citizenship education (Kuş, 2020). Drugs, mafia, terrorism, trafficking in women, interfaith intolerance... Wars, exploitations, fake news and all kinds of manipulations caused by governments due to their economic interests... These and all similar inhumane ugliness can only be minimized by sensitive, active and responsible citizens. This can only be achieved with an education that can give the importance of global citizenship with human values.

We often hear concepts and responsibilities such as effective citizenship, individual rights and responsibilities, knowing public services, and respecting laws and rules, which are frequently mentioned in civic literacy. Should these be provided to students? Yes, it should be earned. However, in order for civic literacy to develop globally in the minds of students, students must first gain critical thinking skills and empathy values. For example, students should be able to question why the United Nations and its affiliated sub-organizations and other civil organizations cannot perform their duties or partially do their duties for a negativity that develops anywhere in the world and evaluate the solutions.

B.2.4. Environmental Literacy

People's experiences with the environment are evaluated and shaped in a global dimension. An environmental disaster that has occurred or may occur in the world threatens the lives of other people. Awareness of environmental problems emerged in the 1970s on the basis of air, water and soil pollution. Since then, research on the factors of the development of environmental literacy has continued. Today, as the interdisciplinary features of environmental issues begin to be understood and experienced more, this concept has begun to be accompanied by the ability to think systemically. These changes develop simultaneously with human-environment interaction and experiences in the process (Teksöz, 2020). In this development process, students should develop sustainable behaviors such as analytical thinking, solution-oriented, socially responsible, and civic participation when it comes to environmental problems. For example, students reflect on the concepts of ecosystem services and respect for nature. They develop behavior by making sense of related concepts. By recognizing the impact of energy production on the ecosystem, they save energy and participate in activities related to environmental problems (Güngör Cabbar & Özcan, 2021).

According to Özdemir (2022), the essence of active participation in the environment is to think globally and act locally. That is, environmental degradation is a global phenomenon. Awareness requires thinking on a global level. In order to prevent this deterioration, concrete steps are needed to be taken jointly by everyone at the local level. In short, the environment can be protected by concrete steps taken jointly at the local level. For these concrete steps, students/individuals can be provided with behaviors that may be necessary. Some of these are (1) time to take action (questioning lifestyle), (2) fulfilling their responsibilities for participation in the environment, (3) participation in the environment at the individual level (turning to an environmentally friendly lifestyle), (4) participation in the environment at the social level (activating the social reflex), (5) participation at the public level (fulfilling political responsibility, and (6) participation at the international level.

Due to the increase in the negative effects of environmental problems on human life, the need for environmentally literate individuals is increasing. Schools should gain the knowledge, attitudes, values and skills necessary to prevent future environmental problems and pollution with a good environmental awareness and to provide sustainable environmental conditions. Programs alone are not sufficient for the acquisition of environmental literacy, they need international solidarity and cooperation. It should not be forgotten that improvements in the environment will only be realized with individuals with a high level of literacy. The most basic

way to achieve this is through education (Aydede, Deveci & Gönen 2019). Within the framework of the 21st century skill, awareness should be raised on certain ecological problems such as population growth, energy problems, agricultural problems, desertification, global warming, extinction of living species and other environmental issues, and with this awareness, students should have the skills to analyze the problems and solve the problems.

Conclusion

As 21st century competencies within the scope of social sciences and social studies in educational institutions, students are required to have a basic level of historical knowledge and to evaluate historical events; to be able to read the relationship between people and the environment by associating geography knowledge with daily life; to have some economic competencies in order to be able to make a living; It is expected to effectively exercise its rights and fulfill its responsibilities by explaining the relations between the state and citizens. Within the scope of the 21st century, this situation has basically brought concepts such as economy, geography, history, state and citizenship to the agenda. Although these concepts have been a part of education life for centuries, the developments and changes in the 21st century have given new meanings.

Considering education on the basis of globalization and evaluating the achievements in the context of today and the future will lead to positive effects for students. In order to truly evaluate 21st century skills, global components must be evaluated and taken into account from the parts to the whole. In other words, students should be able to analyze the branches of science and their knowledge, literacy, skills, values and other achievements in a global context, synthesize them and turn their achievements into life by generalizing them with the principle of vitality.

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CHAPTER 3: CRITICAL THINKING AND PROBLEM SOLVING: A SAMPLE ACTIVITY FOR SOCIAL STUDIES

Res. Asst. Fatma Özge BAYRAM

Introduction

Today, the intense flow of information prompts individuals to think in a way to keep up with this speed. Both media tools and the dynamics of social life led people to think multidimensionally about truth and reality, to make the right decisions because of their thoughts, and to develop their ability to solve problems related to the situations they face. The act of thinking is recognized as one of the proofs of individual existence. Through thinking, which is one of the abilities that distinguishes human beings from other living things and provides superiority, people have been able to survive and reach the advanced dimensions of technology in the 21st century. Many knowledge and skills we have been able to acquire thanks to this ability have also exposed us to an information overload. Among this intense flow, what is important now is to be able to bring the right solutions to facts and problems by thinking critically instead of taking the information directly.

The 21st century has been a period of significant changes in all areas of life. Expectations from future generations have changed, and changes such as digital literacies, multicultural societies, global communication, and mass human mobility have occurred, affecting the World. There have also been changes in people's perceptions and understandings, social life has been renewed and the business world has developed its demands for this new society. Due to the changing conditions, it has become extremely important to train individuals who can adapt to change. The Partnership for 21st Century Skills has identified the skills that the new generation of children need to acquire to be successful in the future. In this way, children will be able to become well-equipped and up-to-date individuals when they enter business and social life in the future. One of the 21st century skills addressed is critical thinking and problem solving. These skills are considered necessary for individuals to keep up with the rapidly changing and developing world. It is aimed to develop these skills at every stage of education to ensure learning and innovation.

One of the important goals of education is to develop children's critical thinking and problem-solving skills. Children face many problems in their daily lives, and they need to be

able to make the right decisions about these problems. A child, having well-developed critical thinking and problem-solving skills, can easily cope with the problems that arise at school, in his/her family and in his/her environment by making the right decisions. In daily life, especially media tools such as the internet and the media, social dynamics, human relations and the intense life and flows encountered in school life require today's children to approach events and phenomena by thinking quickly and critically, and to solve the problems they deal with by passing them through their own mental filters. Social Studies is one of the courses that prepare children for social life. The course aims to educate students as citizens of the future who can build their own lives, analyze every situation they encounter by thinking correctly, and produce the right solutions to the problems they face throughout their lives by approaching them from a critical perspective.

Critical Thinking

The developing technological and global lifestyle leads to an increase in the problems and demands encountered in daily life. As an individual, human beings need to be able to cope with this complexity and various stimuli mentally. Intense information flow and a wide variety of stimuli pose some difficulties for individuals to reach the truth in the information density they encounter. This information flow, which occurs both in media tools and in daily life, requires individuals to obtain the right information by passing it through their own mental filters.

Critical thinking is an extremely necessary and important way of thinking to access the right information and make the right decision in today's information and technology age. Critical thinking, which is a combination of metacognitive thinking skills such as analyzing, evaluating, and inferring, stems from individuals' use of logical and reflective thinking (Dwyer, Hogan, & Stewart, 2014, p. 43). The origin of the concept can be traced back to the Greek philosopher Socrates. As a result of Socrates' studies on the importance of questioning and asking questions, the view that the information questioned may contain illogical aspects even if it is sure of its accuracy has been effective in the emergence of this way of thinking. Critical thinking, which is expressed as a logical way of thinking that guides behavior in philosophy, took its place in the literature through critical philosophy in the mid-20th century. This concept is a way of asking and answering critical questions based on evidence by passing all kinds of information through a structuring process (Başarer, 2017, p. 438; Saleh, 2019, p. 2). Critical thinking has various definitions from past to present. In 1990, in a Delphi study conducted by the American Philosophical Association (APA), critical thinking was defined as the process of making

judgments and decisions in line with a purpose by explaining evidence, concepts, methods, and criteria along with interpretation, analysis, evaluation, and inference (Facione & Facione, 1996, p. 129). According to another definition made by Paul (1992), critical thinking means that individuals think through their own thinking systems and improve their thinking systems. This way of thinking, which is not only a thinking system but also involves the development and transformation of the individual himself/herself, involves the development of the individual's thinking system within the framework of certain standards (Foundation for Critical Thinking Home Page, 2004).

Nowadays, critical thinking has started to be addressed from a perspective in line with past definitions and has gradually developed the understanding of learning to think well, meta-cognition, that is, thinking about your own thinking. Organizations such as the International Society for Technology in Education (ISTE), the Organization for Economic Co-operation and Development (OECD), and the Partnership for 21st Century Learning (P21) have defined 21st century skills with the change in expectations from individuals in the changing and developing world market, and critical thinking has been reconsidered as one of these skills. These skills and competencies have been defined by institutions and organizations for individuals to gain the knowledge and skills they will need to be successful in their business and social lives, as well as the learning outcomes required by the 21st century. Critical thinking skill, as a learning and innovation skill, has also found a place in an increasingly complex world for individuals to be more questioning towards themselves and their environment. In these programs, critical thinking aims to enable individuals to make informed choices on the information obtained and to be able to judge the data in many ways with strong reasoning (Van de Oudeweetering & Voogt, 2018).

By means of critical thinking skills, individuals learn how to access information instead of getting information directly from a source, and they can make better judgments and decisions in complex situations by using skills such as decision-making and problem solving (Dwyer, Hogan, & Stewart, 2014, p. 43). An individual who can think critically is curious, knowledgeable on a variety of topics, confident in his/her reasoning, open-minded, flexible, able to evaluate fairly, aware of his/her personal biases, not rushing to judgment, giving importance to thinking before reaching a decision, able to maintain order even in complex situations, interested in research, persistent in reaching conclusions and hardworking (Facione & Facione, 1996, p. 131). Critical thinkers, who raise important questions and issues clearly and concisely, gather and evaluate relevant information and interpret abstract ideas effectively.

Critical thinking, which requires evaluating the idea according to various standards before making a judgment, is based on open-mindedness among other alternative thinking systems such as reflective thinking, creative thinking, and analogical thinking. In short, a good critical thinker is an individual who is self-directed, disciplined, and able to correct his/her deficiencies by monitoring himself/herself (Paul & Elder, 2008).

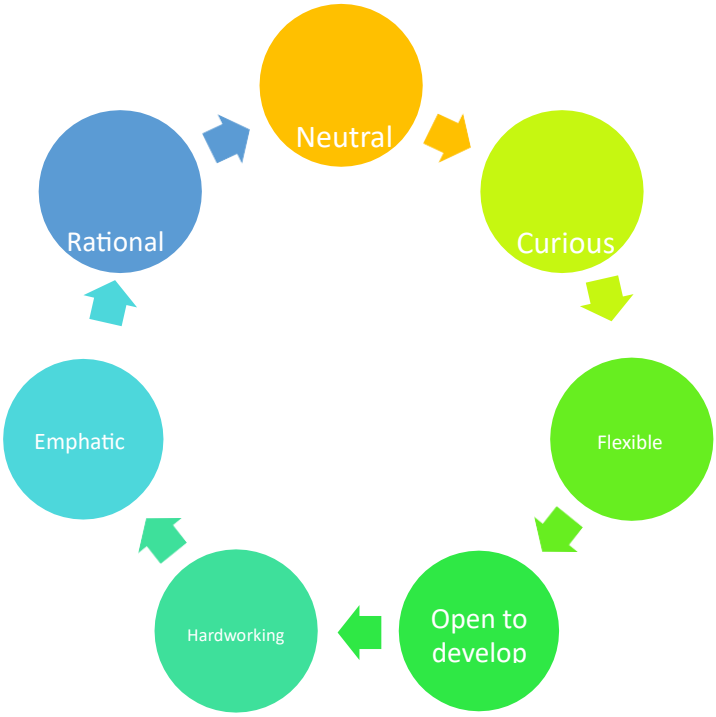

Figure 1. Characteristics of a critical thinker (Paul & Elder, 2008)

It is extremely important for future generations to make decisions by examining information instead of taking it directly, and to act independently of stereotypes and prejudices. Critical thinking, in education, reflects a process that involves questioning and defining a problem. Critical thinking process, in which students can produce predictions on possible scenarios, has a cycle that includes collecting, analyzing, and concluding data about the situation (Zarillo, 2016, p. 153). Accordingly, there are several stages of this process in teaching critical thinking. These are:

Identifying the issue to be evaluated, judged, and criticized.

Identifying the standards or criteria to be used.

Collecting information from reliable sources.

Checking the relevance and accuracy of information.

Checking factual and opinion-based information.

Collecting information from different sources reflecting different points of view.

Discerning inconsistencies in information, bias, stereotypes, and emotional propositions.

Distinguishing between facts and opinions and causes and effects.

Analyzing the positive and negative aspects of the information collected and making a judgment based on relevant evidence and solid facts (Doğanay, 2012, p. 163).

Making a judgment because of critical thinking involves special thinking skills and processes. Accordingly, considering the steps discussed above, reaching a judgment through the filter of critical thinking involves stages that require people to make judgments based on reason and evidence.

Problem Solving

Many problems are encountered in daily life. Problem, in general terms, refers to the situations that come in front of the individual and hinder him/her. When solving a problem or trying to solve it, the individual uses effective thinking styles. Accordingly, to solve a problem, it is necessary to both decide and engage in creative thinking (Adair, 2017, p. 41). Problem solving is the process of transforming the problem that occurs in any situation into a desired situation by developing a purpose and goal (Mayer, 2003, p. 42). In general, problem solving is related to all areas of life and is influenced by individuals' cognitive structures, psychology, educational status, and their perspectives on evaluating the problem.

Problem solving is a multi-stage and complex process. In defining this process, the bridge model proposed by Adair (2017) can be given as an example. According to the model, a bridge should be established to understand which step of the problem-solving and decision- making process the individual is in and to ensure that everyone is in the same place at the same step (Karagöz & Çakır, 2011, p. 1652). Explanations about the model are given in Figure 2.

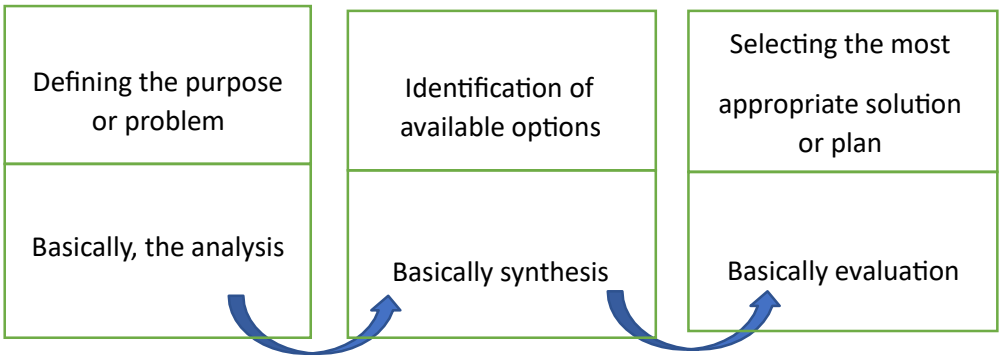

Figure 2. *Bridge model (Adair, 2017, p.44)*

As can be seen in the bridge model expressed in Figure 2, an individual needs to go through various steps to solve a problem. Individuals can reach the solution of the problem by focusing on these steps. Detailed explanations about these stages are presented below as problem solving steps (Yılmaz, 2022, p. 23).

Step 1 is problem identification: This is the process where the problem is recognized and understood. At this stage, the problem should be well understood, and the problem should be defined.

Step 2: Identifying criteria: Identifying possible alternatives for solving the problem also involves establishing solution criteria. In this step, the criteria for solving the problem are determined.

Step 3: Identifying solution alternatives: Creating alternatives for solving the problem is a necessary condition for the best decision-making situation. In this step, alternatives are identified.

Step 4 Evaluating solutions: In this step, solutions are searched with the criteria determined in step 2. Since the best process is sought in this step, it includes the search process.

Step 5 is the selection of the solution: Step 4 involves selecting the best solution to the problem from the search process in step 4.

Step 6 is the implementation of the solution: This is the step where the selected solution is implemented.

Problem solving skills help individuals and groups to adapt to their environment. Some problems have corrected answers or definite solutions and it is possible to reach the correct answers by using certain strategies. However, some problems do not have a single correct

answer and require interdisciplinary knowledge, multidimensional thinking, and creativity to solve them. Throughout education, it is aimed to provide individuals with problem solving skills that they can acquire in this respect. In this way, students are enabled to use certain cognitive strategies and to find and use the tool that will lead to the goal (Senemoğlu, 2011, p. 536).

One of the basic competencies that students should acquire is problem solving skills. Developing individuals' problem-solving skills and enabling them to use these skills correctly and effectively in their daily lives has been a challenging issue in the education system. One of the important indicators of this situation is the data of comprehensive educational assessment studies such as PISA (Programme for International Student Assessment) applied in OECD (Organization for Economic Co-operation and Development) countries. According to the data, it was determined that there was a need to improve students' analytical problem-solving skills in line with the scores obtained in 2003, 2012 and 2015 (Greiff, Holt & Funke, 2013, p. 73). As can be seen in the results of the study, problem solving is one of the skills that are felt to be lacking and needed in education systems. Problem solving skill is a skill that individuals need to use frequently both in their educational life and in their social life. The dynamics of social life, which has an increasingly complex structure, the advanced dimensions of technology, global problems in political, social, and economic terms increase the problems. It is extremely important to ensure that individuals become able to produce solutions to these problems in their future lives and to enable students to develop and use problem solving skills.

The Importance of Critical Thinking and Problem Solving in Social Studies

Social Studies, in its most general definition, is a course that aims to develop the citizenship competencies of individuals in order to ensure cultural continuity and prioritizes their socialization by aiming to develop students' thinking skills such as problem solving, decision making, and analysis, which are based on the basic concepts and theories of the disciplines that make up the structure of social sciences (Barr, Barth, & Shermis, 2013). Social Studies, which aims to raise individuals as citizens who can make informed decisions and solve problems under changing world and country conditions, emphasizes that effective and democratic citizens should have skills such as critical and creative thinking, problem solving, decision making, and high-level comprehension in their lives (Öztürk, 2012, p. 4). The National Council for the Social Studies (NCSS) is one of the leading organizations that have a word in the systematization and dissemination of the Social Studies course. NCSS is an organization that has been established since 1921 for the advancement of Social Studies education, and in 1994 it set national curriculum standards for the Social Studies course. According to the organization, Social

Studies is a course that aims to equip students with the knowledge and skills necessary for them to be active participants in social life, to have the necessary questioning skills as a member of a global world, to use data collection, analysis, collaboration, decision-making and problem-solving skills, with the main goal of developing students' citizenship competencies. This aim, which seeks to make the Social Studies course a "laboratory of democracy", prioritizes the diversity of the course among students and the harmonization and pluralism within this diversity to ensure an order in social life (NCSS, undated). As can be seen from the definitions, both the NCSS and the definitions accepted by various researchers prioritize the ability of individuals to think based on knowledge and reason as one of their roles in social life and to be a part of social life. The Social Studies course aims to provide students with skills such as logical and critical thinking, curiosity, questioning, problem solving, communication, cooperation, etc. that will organize their social lives and enable them to exist actively in their environment. It is important for students to take a critical and analytical approach to various problems that they may encounter in social life and to benefit from the basic understandings of social sciences that form the structure of the Social Studies course while solving these problems (Maksum, Widiana, & Marini, 2021, p. 614).

Developing students' critical thinking and problem-solving skills has always been an important goal of Social Studies education. In the classroom, it is important for students to learn different perspectives and not to see textbooks as the only source of information. One of the priorities of the Social Studies course is for each child to compare, contrast, reflect on, and generalize and judgments by using his/her own powers of inference during learning (Parker, 1894 as cited in Zarillo, 2016, p. 6). Research also shows that students' critical thinking and problem-solving skills can be easily developed in the classroom practices of the Social Studies course. The journals Social Education, Social Studies and the Young Learner, and Middle Level Learning published by NCSS frequently include studies on developing critical thinking and problem-solving skills. Various suggestions have been developed for teachers to develop these skills in the Social Studies course and to enable students to use these skills effectively. In the study conducted by Karabulut (2012, p. 202), these suggestions presented between 1997 and 2006 were compiled and the activities suggested by academics specialized in the field of Social Studies were listed. Accordingly, the academics suggested discussion, writing, question-answer, use of technology, role playing, project, simulation, and literature- based activities in the classroom. Social Studies is a course that can support critical thinking and problem-solving skills with in-class and out-of-class practices. These activities can also be supported by practices

such as brainstorming, synectics, and six-hat thinking method. Accordingly, examples of practices that can develop critical thinking and problem-solving skills in the Social Studies course can be presented as follows:

The discussion method is based on students talking and discussing about a topic under the guidance of the teacher and looking for possible solutions. It develops students' active participation in the teaching-learning process and their ability to communicate and cooperate effectively. At the same time, thanks to this method, students learn to review events together and reach conclusions together. With this method, students can reveal their knowledge and opinions, define problems better and suggest solutions (Sözer, 1998, p. 101).

The question-answer method involves answering the questions asked and discussing, explaining, and interpreting these questions and generalizing. It contributes greatly to the student's orientation towards creative and constructive thinking, seeing cause-effect relationships and developing the ability to think objectively (Sözer, 1998, p. 94).

Role playing is a method based on students playing the role given to them with their own interpretations. During role play, students can more easily express their own feelings and thoughts behind another personality, examine social situations in depth, solve social problems, and test possible solutions to problems (Erden, undated, p. 143).

The brainstorming technique is used for a group to come up with solutions, make decisions and generate ideas. In this technique, students think about a topic, event or problem and produce many ideas without worrying about whether they are logical or not, and the ideas are evaluated. With this technique, it is ensured that students accept different views and opinions on a certain subject and develop different perspectives (Yaşar & Gültekin, 2012, p. 99).

The synectic technique presents different and seemingly unrelated examples with analogies and metaphors. This technique aims to develop students' problem-solving skills by revealing creative ideas (Yılar & Karadağ, 2020, p. 321).

Six-hat thinking is a technique in which hats of different colors reflect different thoughts to see the existence of different opinions on any subject. In this technique, the white hat represents neutrality, the red hat represents emotionality, the black hat represents pessimism, the yellow hat represents advantages, the green hat represents creativity, and the blue hat represents evaluating ideas. It enables students to think creatively, empathize, and approach problems

related to different subjects with a critical perspective according to each hat (Ocak, 2020, p. 326).

The interdisciplinary nature of the Social Studies course aims to improve the students' knowledge of social science issues and to ensure that they have a harmonious and correct approach to the situations they may encounter in their social lives in the future. Critical thinking and problem solving are among the basic skills that the course aims to provide students with. With the teaching contents, methods and techniques designed in a way that students can enjoy, it can be ensured that these skills can be gained, and students can adopt these skills throughout their lives.

Critical Thinking and Problem Solving in the Social Studies Curriculum

The Social Studies Curriculum was updated in 2018 and many elements of the curriculum were changed (Ministry of National Education, 2018). Accordingly, changes have occurred in the roles expected from individuals among the general aims of national education in the curriculum. In the new curriculum, the individual is defined as someone who produces knowledge, uses it functionally in life, solves problems, thinks critically, is entrepreneurial, determined, has communication skills, empathizes, and contributes to society and culture. Critical thinking and problem-solving skills, which are also included in the general purpose of national education, appear as basic skills that students should acquire not only in the Social Studies course but also in all stages of education.

In the basic perspective of the curriculum, the main purpose of the education system is to raise individuals with knowledge, skills and behaviors integrated with values and competencies. While knowledge, skills and behaviors are tried to be acquired through curricula, values and competencies function as the link that establishes the integrity between these knowledge, skills and behaviors. Among the competencies of the curriculum is digital competence, which is one of the important competencies gained by critical thinking skills. This competence involves the safe and critical use of information and communication technologies for work, daily life, and communication. Due to the intense flow of information, which is one of the benefits of the digital age, it is aimed to develop individuals' ability to approach information critically and question information before accepting it as true.

Critical thinking and problem solving are among the basic skills directly included in the Social Studies Curriculum. In the 2018 revised curriculum, critical thinking and problem-solving skills are integrated into the course in accordance with the Turkish Competencies

Framework. These include communication in mother tongue and foreign languages, mathematical competence and basic competencies in science/technology, digital competence, learning to learn, social and citizenship competencies, initiative and entrepreneurship, and cultural awareness and expression. On the other hand, many skills and values such as critical thinking, problem solving, decision making, entrepreneurship, taking responsibility, digital citizenship, etc., which are included in curriculum and expected to be acquired by students, are considered within the scope of 21st century skills in the literature. Therefore, it is seen that the necessity of providing individuals with these skills at all stages of the education system is reflected in the curricula in a concrete way (Özdemir Özden, Karakuş Tayşi, Kılıç Şahin, Demir Kaya, & Bayram, 2018, p. 1170).

However, among the specific objectives of the course, it is stated that students should "have critical thinking skills as individuals who know the ways to reach accurate and reliable information". As it can be understood from this statement, the program aims for students to reach reliable information by questioning the information they obtain instead of accepting it directly. Critical thinking, which is a form of metacognitive thinking, is addressed in the program in terms of directing the use of these skills and providing meaningful and permanent learning.

Among the issues to be considered in the implementation of the program is the statement "Current and controversial issues related to the gains can be brought to the classroom by associating them with problem solving, critical thinking, using evidence, decision making and research skills using different discussion techniques." The program does not ignore the conditions of the digital age in raising students as individuals who can think critically and solve problems. "In recent years, depending on the developments in digital technology, new situations (digital citizenship, e-Government, virtual commerce, social media, etc.) and some problems (digital divide, identity theft, privacy of personal information, cyber fraud, cyber bullying, etc.) related to citizenship rights and responsibilities have emerged." With this statement, it is aimed to develop some of the problems that students may encounter in the digital age and their competencies to cope with them. Regarding the issues that should be considered in order to develop students' problem-solving skills, the statement "Students should often be compared with real life problems and contradictory situations by making use of events inside and outside the school and reflective thinking on the social problems they encounter" is included. The Social Studies course has a structure intertwined with social life and it is aimed to prepare students for the future by comparing them with real current life problems.

One of the elements that constitute the basic structure of the Social Studies Curriculum is the learning areas. There are 7 learning areas in the Social Studies Curriculum, which offer an interdisciplinary structure that organizes learning, where interrelated knowledge, skills and values can be seen. These learning areas are Individual and Society, Culture and Heritage, People, Places and Environments, Science, Technology and Society, Production, Distribution and Consumption, Active Citizenship and Global Connections. The general aim of the learning area named Science, Technology and Society of the program is to enable students to comprehend that innovative, critical, and scientific thinking is the basis of developments in science and technology; to understand the development process of science and technology and its effects on social life and to acquire the ability to use technology in accessing information.

In the Individual and Society learning area of the Social Studies course at the 6th grade level, it is aimed to teach values such as solidarity and benevolence, as well as skills such as critical thinking and perception of time and chronology. The content of this learning area at the 6th grade level is the change of social roles over time and the role of social, cultural, and historical ties in ensuring social cohesion. In addition, to develop critical thinking skills in students, it is aimed to teach the stereotypes and prejudices that can be encountered against different individuals and groups that prevent living in harmony in society, individuals with special needs, individuals with different ethnic, religious, and sectarian views. In this way, students will be able to develop a critical perspective on the solution of this problem by seeing the stereotypes and prejudices that they may experience or encounter in their social lives.

In the 6th grade Active Citizenship learning area, it is aimed to gain critical thinking, correct, beautiful and effective use of Turkish and political literacy skills with the value of equality. In this learning area at this grade level, issues such as different forms of government, the importance of democracy, rights and responsibilities, and the value given to women in social life are discussed critically in terms of the basic principles of democracy. The mission of raising a good and effective citizen, which is one of the main objectives of the Social Studies course, enables a citizen to see the basic problems that a citizen may encounter in social life in this learning area and to approach these problems in a more solution-oriented manner by knowing their rights and responsibilities.

In the 6th grade level Global Connections learning area, it is aimed that students acquire the value of sensitivity to cultural heritage and research and critical thinking skills. In this grade level learning area, Turkey's relations with other countries are examined from a cultural, social, political, and economic perspective. In addition, the effects of popular culture on Turkish

culture are examined through media tools. In this course structure, where the elements that do not belong to Turkish culture and the general structure of popular culture are examined from a critical point of view, the problems that can be created by elements that do not belong to the culture are emphasized.

The People, Places and Environments learning area at the 7th grade level aims to provide students with skills such as using evidence, problem solving, drawing, and interpreting tables, graphs, charts, and diagrams with the value of freedom. The learning area at this grade level includes the factors affecting settlement from past to present, the demographic characteristics of Turkey, the causes and consequences of migration, and the problem of restriction of freedom of settlement and freedom of movement. By enabling students to produce solutions to problems related to migration and the restriction of fundamental rights, and by examining the case studies of people who have experienced these problems, these social problems can be addressed with real case examples.

At the 7th grade level of the Active Citizenship learning area, it is aimed to provide students with the value of peace and problem-solving skills. In the learning area at this grade level, the emergence of democracy and its meaning today, Atatürk's contributions to the development of Turkish democracy and the problems encountered in the implementation of democracy are analyzed. It is aimed for students to examine the problems encountered in the life of Turkish democracy, to see current problems related to antidemocratic practices in democratic societies, to examine democratic practices in family, school, and society. It is important for students to use their problem-solving skills effectively regarding the suggestions to be developed for the solution of the problems encountered in these subject areas.

At the 7th grade level of the Global Connections learning area, it is aimed to provide students with values such as peace and respect and skills such as cooperation, problem solving and recognizing stereotypes and prejudices. In this learning area at this grade level, international organizations that Turkey is a member of or has relations with are introduced by giving examples. In addition, it is aimed for students to question stereotypes about various cultures that will play an important role in developing problem solving skills and to develop ideas for solving universal problems such as global climate change, natural disasters, hunger, terrorism and migration.

Conclusion

One of the important aims of education is to ensure the socialization of students, who are the individuals of the future, and to equip them with a desired and sought-after equipment in the business world. Students need to have certain competencies to have a say in the business world. These standards, which are determined by international circles and needed by the business world, are referred to as 21st century skills and include features such as problem solving, critical thinking, communication, cooperation, and self-management (National Research Council, 2012). Critical thinking skill requires students to analyze the relationship between the whole and the part in complex systems by knowing various types of reasoning, to evaluate alternative points of view, and to draw conclusions by interpreting them. Problem solving skill refers to reaching a conclusion by using mental steps to solve a problem or situation (Partnership for 21st Century Learning, 2015).

The Social Studies course, which offers many opportunities for students to solve the problems they face in social life and answer complex questions, is a course that aims for effective learning, where students are left alone with current event problems that require them to think critically (Zarillo, 2016). In addition to its main purpose of educating democratic citizens and teaching social science content, the Social Studies course now has the primary goal of developing students' 21st century skills (Partnership for 21st Century Learning, 2015). Critical thinking and problem-solving skills, which make an important contribution to the socialization of students and their success as individuals in both their professional and social lives, are shown as the skills that the Social Studies course aims to provide students with in accordance with its nature.

Examples of Activities to Develop Critical Thinking and Problem-Solving Skills in Social Studies Course

In this section, activities created by the author for the development of critical thinking and problem-solving skills in the Social Studies course are included.

Activity 1: Critical thinking skills

Application Template
Course Title: Social Studies **Class:** 6 **Topic:** The place of women in social life **Recommended duration:** 3 class hours (120 minutes) **Achievement:** SB.6.6.6. Recognizes the value given to women in social life based on Turkish history and current examples. **Materials:** Colored paper, crayons, world map **Environment:** Classroom
Preparation for the Event **Duration** 40 Minutes
• "Which professions can women do?" and "Which professions cannot women do?" • The students are asked to state which professions women can and cannot do and the professions of women they see around them that are interesting to them, together with the reasons why. • Visuals of women from various professions are projected on the board. The teacher makes a connection with the topic through these visuals and tells the students that in this lesson they will examine the place of women in social life. • The various roles of women in social life, the fact that women have the competence to perform any profession, positive discrimination, violence against women and gender discrimination are emphasized. • Biographies of women figures who have played an important role in Turkish history such as Sabiha Gökçen, the first female pilot, Nene Hatun, the first archaeologist Jale İnan, physicist Engin Arık, actress Afife Jale and Doctor Safiye Ali are read. • The contributions of the exemplary women living in a democratic and secular Turkish state are mentioned and examples are given of the social, political and social rights that women living in countries ruled by authoritarian regimes such as Syria, Iran and Sudan are deprived of.
Implementation of the Activity **Duration** 40 Minutes

- The activity starts by examining newspaper news about the lives of women in authoritarian regimes and the lives of Turkish women. This news is discussed.
- Hang a world map on the board and mark on the map which news item from which country is the subject.
- Students are asked to imagine that they have a girlfriend of their own age living in Iran and to write a letter to this friend from Turkey.
- Colored papers are distributed to the students, crayons are taken out and students are asked to design a newspaper article that includes the importance and contributions of Turkish women by thinking about the importance of Turkish women and the rights they have based on the news they have examined.

Evaluation of the Event

Duration 40 Minutes

- The topic of the lesson is repeated, and the created newspaper news is presented on the board.
- Letters are read.
- Students are given an assignment to write the life story of a woman they look up to in their environment.

Activity 2: Problem solving skills

Application Template
Course Title: Social Studies **Class:** 7 **Topic:** Solutions to global challenges **Recommended duration:** 3 class hours (120 minutes) **Achievement:** SB.7.7.4. Develops ideas for solving global problems with friends. *Global climate change, natural disasters, hunger, terrorism, and migration will be discussed.* **Materials:** Cardboard, crayons **Environment:** Classroom
Preparation for the Event **Duration** 40 Minutes
• Students are asked the question "Why have there been so many natural disasters, climate change, hunger, terrorism and migration waves both in our country and in the world in recent years?". • Each topic is explained, and students are asked to express their views on the reasons for each. • News from Turkey and around the world about melting glaciers, forest fires, earthquakes, terrorism, and the migrations that occur because of these situations are projected on the board. • The class is divided into 5 groups based on the news read. Each group is assigned a global problem and prepares a report on the causes, consequences, and solutions of this news.
Implementation of the Activity **Duration** 40 Minutes
• Each group presents their report on the board and gets the opinions of their peers. • Each group is given a large piece of cardboard and asked to develop a project to solve the global problem they are addressing. • Problem solving steps are written on the board and each group evaluates its project according to these steps.
Evaluation of the Event **Duration** 40 Minutes

- The designed projects are exhibited on the classroom walls.
- Students and teachers from other classes are invited to present their projects and solutions to global problems.
- Each group is assigned to prepare a graphically designed report on the global problem they have been studying and the destruction and various negative consequences it has caused from the past to the present.

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CHAPTER 4: CREATIVITY AND INNOVATION: A SAMPLE ACTIVITY FOR SOCIAL STUDIES

Res. Asst. Hüseyin KARAASLAN

Introduction

In this chapter, creativity and innovation skills are evaluated in terms of social studies education. First, the concepts of creativity and innovation are explained separately from each other, and then the relationship between these skills and social studies education is focused on. Creativity and innovation skill is one of the four basic skill areas defined by the P21 organization under the title of "Learning and Innovation" skills. In this chapter, creativity and innovation skills will be based on the framework of the P21 organization.

The Concept of Creativity

Creativity is defined as the tendency to come up with new and original ideas, design and realize personal works and make logical evaluations (Turkish Academy of Sciences, 2011). In previous definitions of creativity, some factors such as the cognitive characteristics of the person, the characteristics of the product, and its usefulness were considered as a single component. However, this perception has changed over time and creativity has become comprehensive by considering it as the interaction of the individual, environment, and product (Özyaprak, 2016, p. 68).

Theories of Creativity

Creativity is a skill that is nurtured by the interaction of a creative person, process, and product. Definitions and theories of creativity are created by emphasizing one of these three products as dominant (Onur & Zorlu, 2017, p. 1574). Regarding creativity theories, different theories are included in the literature. Some of these are mentioned below.

Wallas' Four-stage Theory: Wallas (1926, p. 80) argued that creative thinking emerges in four stages. In the first stage, the preparation stage, an existing problem is examined. In the second stage, the incubation stage, ideas are formed to solve the problem. In the third stage, illumination the ideas formed in the previous stage are combined with a flash in the mind. In the last stage, verification), the idea to be used in solving the problem is evaluated.

Psychoanalytic theory: This theory, which emphasizes that human behavior cannot be explained only by conscious processes and that psychology should also examine the unconscious, is one of the most controversial theories of creativity. According to this theory, creativity is a process of inspiration in which emotions pushed into the unconscious and lacking in human beings suddenly come to light (Onur, 2018, p. 148).

Four P's Creativity: In his article, Rhodes (1961) explained creativity in a framework called Four P's Creativity. These P's are respectively; person, process, press, and product. In the Person dimension, the author discussed who the creative person is. In the Process dimension, the stages of creative thinking are discussed. Press, another dimension, is explained as the interaction between the creative person and the environment. The last dimension, Product, is defined as the result produced by the creative person.

Gestalt Theory: Gestalt theorists use the concepts of productive thinking and problem-solving rather than creativity. According to Max Wertheimer, in the process of managing creative thinking, the problem should be handled structurally. According to this theory, difficult regions, important and less important regions, and part-whole relations of the problem should be defined and the problem should be restructured and solved (Sungur, 1997, p. 36).

Humanist Approach: Those who adopt the humanist approach have an attitude that prioritizes human beings in their approach to creativity. For example, they think that products such as bacteriological weapons, which harm humanity and are considered by some to be products of high creativity, are low-level creative products (Yavuz Yavuzer, 1994, p. 68).

Associative Approach: According to this approach, achieving a creative solution comes through serendipity, similarity, and mediation. In the serendipity, the solution is reached when the elements to be used in the creative solution are found together by serendipity. In the similarity dimension, the result is reached when the elements come together as a result of similarity and harmony. In the mediation dimension, the result is reached by bringing together associative elements with the mediation of other known elements (Mednick, 1962, pp. 222-223).

The Concept of Innovation

Since innovation does not cover the entire concept of innovation, it is not considered correct to use it instead of innovation. However, the fact that the concept of innovation fills the concept of innovation over time makes it possible to use the concepts of innovation and innovation in the same sense in the Turkish language. Nevertheless, it cannot be said that everything new

corresponds to innovation. The basis of innovation is not everything new, but innovations that turn into economic and social added value (Uzkurt, 2010, p. 37).

By now, the time has come for a revolution in which innovation is identified, developed, empowered, de-risked, launched, and promoted (Keeley, Pikkel, Quinn, & Walters, 2015, p. 3). So how does innovation come about? There are different explanations for this question in the literature. A model constructed in the literature for the emergence of innovation is given a place in the book called "The Innovator's DNA" (Dyer, Gregersen, & Christensen, 2011, p. 27). This model is depicted in Figure 1.

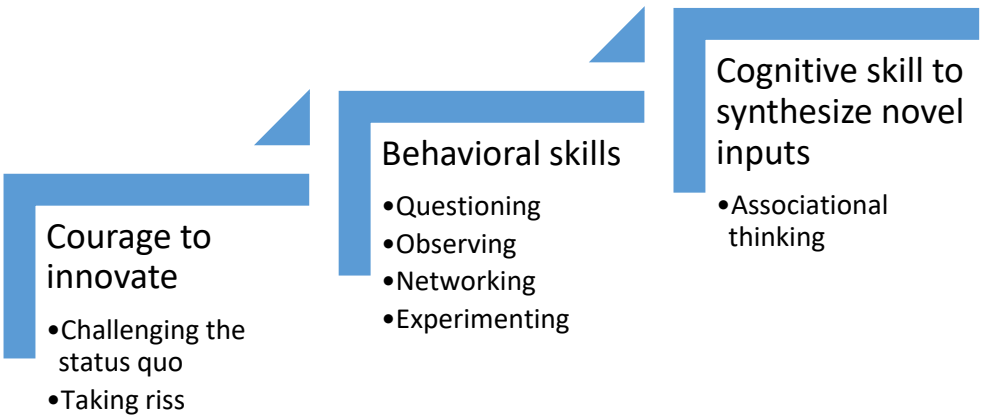

Figure 1. The Innovator's DNA model for generating innovative ideas.

When Figure 1 is examined, it is seen that the competencies in the input-output model created for the emergence of innovation contain a process similar to the steps of problem-solving. It is noteworthy that the first step in the emergence of an innovative idea is courage. Considering that it is important to acquire competencies such as risk-taking and courage at an early age, it can be said that it would be useful to use the process in the diagram by modeling it in the teaching environment. It can be argued that the competencies in this model are tangible enough for children to acquire them. Apart from this model, innovation processes have been conceptualized in other ways in the literature. In a four-stage model of the emergence of innovation, the innovation process takes place in the following stages (Bardakçı, 2019, p. 63):

1) Exploration and Learning

2) Idea development

3) Testing and implementation

4) Commercialization

When the four-stage model is analyzed, it is seen that innovation is similar to creative products. It can be inferred that innovation is a commercialized form of creative products. Another concept that the concept of innovation is frequently used interchangeably is invention. Beswick, Bishop, and Gerathy (2018, p. 14) explain the difference between invention and innovation as follows:

"When we want to invent, we bring together a team of experts and ask them to create a new product or design a process. When we want to innovate, we involve all stakeholders to improve existing products, processes, services, or experiences."

Family and Environment in the Development of Creativity and Innovation Skills

The first place where children's education begins is in the family. In this respect, it can be argued that children's creativity can first be nurtured in the family. Yazgın (2020, p. 28) stated that the environment that nurtures children's creativity expands from the family to the society. According to the authors, to develop children's creativity in the family, many factors such as having many options at home that will attract their interest, opportunities to gain experience, trips to explore the immediate environment, and books are important. In short, it is stated that children's creativity will be developed through play and it is argued that creativity will be nurtured in proportion to the size of the play environment.

In terms of psychology, many mental factors such as thinking from different perspectives, divergent thinking, and openness to experience are related to creativity. More generally, in terms of social psychology, creativity has an important relationship with environmental factors. In summary, various sources state that creativity emerges as a result of the interaction of personal and environmental factors (Kuru Turaşlı, 2020, pp. 10-11). In the development of creativity and innovation, the presence of different stimuli in the family and environment can be considered as a variable that feeds this skill.

Creativity & Innovation and Education

Creativity is a skill that starts in the family and environment and is perfected in education (Kale, 1994, p.6). Today, it is no more the importance of creativity in education, but how to develop creativity in education that is the subject of discussion. To raise creative individuals, the first thing to be done is to prepare educational programs in this direction and to prepare

teachers who are the implementers of these programs as sensitive to this issue (Karakuş, 2001, pp. 3-6). Teaching creative thinking skills and techniques is not the only way to develop creativity in formal education. In addition, making the classroom climate appropriate, providing deep knowledge in a field, working under the guidance of a field expert, using differentiated curriculum and rich course materials, developing products, and working on personality traits that will support creativity can be counted among the practices that encourage creativity (Özyaprak, 2016, p. 73). Creative products may differ according to individuals. While a product may be considered creative by a child unfamiliar with the subject, it may not be considered creative by adults or experts with experience in the subject. A product may be considered creative in one culture but not in another culture (Cho, Chung, Choi, Seo, & Baek 2013).

Innovation is first and primarily a skill of combination. Innovation is a combination of skills from different areas of expertise. Therefore, it cannot be said that there is a single path to innovation. Rather, it is more appropriate to say that innovation is an ecosystem (Satell, 2018). Therefore, it is seen that collaborative work is one of the appropriate methods for the development of creativity and innovative skills.

When all these are considered, creative products and innovative ideas arising from individual differences in education should be seen as rich. It is important to focus on the barriers to creativity and innovation in education. In this way, improvements can be made in creativity and innovation education. Removing the barriers to creativity will make it easier for innovative ideas to emerge in classrooms. These barriers are discussed in the next title.

Barriers to Creativity and Innovation

Factors limiting creativity are categorized at different levels. These are explained by Memduhoğlu, Uçar, and Uçar (2020) as follows.

1) Individual Factors: Perceptual factors (set creation), cultural factors, emotional factors, and past experiences.

2) Social Factors: Society's adverse attitudes towards individuals and their restrictions are examples.

Teachers have important roles in combating the barriers to the acquisition of creativity and innovation skills. Teachers getting to know their students more closely and respecting their ideas will contribute to the development of creativity and innovation in the classroom. According to Orhon (2014), the ability to think flexibly, fluently, originally, and in detail, which

are the four dimensions of creativity, is especially vital for teacher education. Creativity in teacher education should be considered as a criterion in teacher selection and placement. Opportunities should also be created for the development of creativity competence in the faculties of education. Aljughaiman & Mowrer-Reynold (2005, p. 18) reported in the literature that many students who are disliked by their teachers are highly creative. However, they argued that teachers have many misconceptions about what the standards of creativity are.

One of the barriers to creativity and innovation skills is education from one point of view. Students will have difficulty grasping the associations in education that is carried out through the perspective of a sole discipline. Therefore, interdisciplinary teaching offers an important opportunity for the development of creativity and innovation skills.

Interdisciplinary Program in the Development of Creativity and Innovation

The emergence of creative thinking requires the ability to create associations and connections between dissimilar subjects by creating new categories and concepts (Michalko, 2011, p. 14). Creativity is an interdisciplinary concept that encompasses many sciences such as art, philosophy, psychology, and cognitive sciences and has professional applications in fields such as architecture, business, engineering, and educational sciences (Klein, 2017, p. 55). This aspect of creativity has led to the concept of interdisciplinary creativity being included in the literature. The concept of interdisciplinary creativity is explained as a new and useful solution method that creates connections between different ideas for solving problems (Szostak, 2017, p. 18).

Interdisciplinary teaching is defined as a curriculum approach that applies the methods and subject areas of more than one discipline together to examine a theme, topic, or problem (Jacobs, 1989a). Interdisciplinary teaching allows connections to be made between the subjects of different courses and offers the opportunity to teach subjects and concepts from the perspective of different disciplines. Thus, it both enables the teaching of complex subjects and broadens the perspective (Jacobs, 1989b). In these regards, interdisciplinary teaching offers important opportunities for the development of creativity and innovation skills. With this teaching method, students will be able to better recognize the interdisciplinary connection of concepts and gain the ability to make associations and connections.

Creativity & Innovation and the P21 Framework

The Partnership for 21st-Century Learning (P21) guides educators to integrate 21st-century skills into academic subjects. The skills are conceptualized as key topics, 21st-century themes,

standards and assessment, professional development, and learning environments. In this framework, "Creativity and Innovation" is included under the "Learning and Innovation" skills. In the document published by the organization, the following steps are suggested for the "Creativity and Innovation" skill (The Partnership for 21st Century Learning, 2015).

Think Creatively:

- Use a variety of idea-generation techniques such as brainstorming
- Generate new and valuable ideas.
- Elaborate, refine, analyze, and evaluate your ideas to develop and maximize your creative effort.
- Develop, implement, and share new ideas with others.
- Be open to new and different perspectives. Incorporate group input and feedback.
- Show originality and creativity in their work and understand the real-life limits of new ideas.
- Perceive failure as an opportunity to learn. Understand that creativity and innovation is a long-term process of small successes and mistakes.

Implement Innovations:

- Act on creative ideas to make a tangible and useful contribution to the area where the innovation will take place.

As can be seen in the descriptions, the P21 framework conceptualizes Creativity and Innovation skills in three main parts. When an assessment is made, it can be said that to apply this skill, various techniques should be used to generate creative ideas, respect for differences is important and teamwork is seen as useful.

Creativity and Innovation in Social Studies Education

Social studies are an appropriate subject to develop 21st-century skills because it is a relevant subject in life. To develop 21st-century skills and productive students, it is necessary to ensure innovation in social studies and to establish a pedagogy called creative pedagogy (Widiastuti, Supriatna, Disman & Nurbayani).

The P21 Organization and the National Council for Social Studies (NCSS) collaborate to make 21st-century skills the focus of social studies education. The themes put forward by the P21 organization include global awareness, information, media, and technology skills, and life and career skills (flexibility and adaptability) (Yell & Box, 2008).

In collaboration with NCSS and the P21 organization, a document called "21st Century Skills Maps" was published. In the document, learning outcomes were identified for fourth, eighth, and, twelfth grades under the Creativity and Innovation. The learning outcomes are summarized below. The outcomes are associated with the interdisciplinary theme of "civic literacy".

Grade 4: Students develop a creative solution to a class or school-related problem.

Grade 8: Students demonstrate their creativity on a topic or assignment.

Grade 12: Students design an original project that can be submitted online.

The social studies curriculum (Ministry of National Education, [MoNE] 2023), which will be implemented in Turkey starting from the 2023-2024 academic year, has many direct and indirect elements that are suitable for the development of creativity and innovation skills. These elements are spread across many elements of the curriculum such as key competencies, assessment and evaluation process, standards, values, and skills. In this context, first of all, the achievements that can be related to creativity and innovation skills will be examined. Some standards that promote working in teams and aim to create innovation are shown in Table 1. Apart from these, some outcomes indirectly serve to develop creativity and innovation skills.

Table 1

Standards in the Social Studies Curriculum in Turkey

Grade	Theme	Standard and its Description
4	Science, Technology, and Society	Develop ideas for designing unique products based on the needs for their environment. *Sample entrepreneurs and their success stories are emphasized.*
5	Production, Distribution, and Consumption	Develop new ideas based on production, distribution, and consumption through collaboration.
6	Science, Technology, and Society	They put forward ideas about the effects of scientific and technological developments on future life.
6	Production, Distribution, and Consumption	Develop investment and marketing project proposals taking into account the geographical features of Turkey.

7	Production, Distribution, and Consumption	Considering the new vocations emerging depending on the developments in the world, vocational *They examine new professions as well as current professions, compare their characteristics, abilities, and interests with the requirements of these professions and, make decisions about their career.*
7	Production, Distribution, and Consumption	Analyzes the changes brought about by digital technologies in production, distribution, and consumption networks.
7	Global Connections	Develops ideas for solving global problems with his/her friends. Global climate change, natural disasters, starvation, terrorism, and migration will be discussed.

When Table 2 is examined, it is seen that most of the seven standards that are directly related to creativity and innovation skills in the Social Studies Curriculum are included in the Production, Distribution, and Consumption theme and at the seventh-grade level. While there are relevant standards at all grade levels in the social studies course, there are no relevant standards in all themes. The fact that the four themes do not contain standards to support creativity and innovation can be considered a deficiency. Nevertheless, other standards can be the setting for activities to develop creativity and innovation skills to the extent of teachers' skills. As a suggestion to the curriculum makers, the standards to be taken as a basis for the development of creativity and innovation skills should be increased in quantity and spread to all themes. Apart from these, creativity is emphasized in the "Competencies" section of the curriculum. For example, under the heading "Communication in the Native Language", the competency of creative linguistic communication in all kinds of social and cultural contexts is expressed. In another competency, "Initiative Taking and Entrepreneurship", it is argued that this competency includes creativity, innovation, and risk-taking. The last competency in which creativity is emphasized is "Cultural Awareness and Expression". Under this heading, creative expression of feelings, opinions, and experiences is underlined. In the "Measurement and Evaluation Approach in Curricula" section of the Curriculum, it is stated that measurement and evaluation in education are highly influenced by diversity such as the individual, social environment, school facilities, and course content. Therefore, it is highlighted that teachers should exhibit creativity and originality in the measurement and evaluation process. It is concluded that creativity is not only a process included in subject areas but also in assessment.

In the learning areas section, the only grade level where creativity skill is directly included is the fifth grade. At this level, it is stated that students develop creative skills in the learning area of "Global Connections". It is seen that the standards in this section are too weak to include activities such as long-term work and teamwork required to acquire creativity skills. For example, the standard "Gives examples of common heritage elements found in various countries." is an outcome in which it is difficult to carry out activities aimed at creating a creative and new product. Some of the 27 skills under the skills heading are related to creativity and innovation. These include research, entrepreneurship, collaboration, and innovative thinking skills. It can be argued that skills other than these are also skills that can be linked to the development of creativity and innovation. Although creativity and innovation are skills, it can be said that a better educational process can be designed by establishing a relationship with values. In this context, values such as solidarity, aesthetics, and industriousness, which are included in the "Values" section of the curriculum, can be shown among the values with which the mentioned relationship can be established.

As a result, it is seen that there are various elements in the social studies curriculum for the acquisition of creativity and innovation. However, the lack of achievements that would cover longer-term studies in the achievements section was considered a deficiency. In addition, it would be more beneficial to spread the elements related to creativity throughout the curriculum rather than squeezing them into certain themes.

Evaluating Creativity and Innovation in Social Studies Education

There are different views in the literature on the assessment of creativity. According to one point of view, creativity should be measured as it is a general skill. Another perspective advocates field-specific approaches to measuring creativity. Some researchers recommend the use of personality inventories due to the limitations of tests at the point of measurement. In the process of measuring creativity, it is recommended to take the creative product, creative process, product, and environment as the components of creativity (Kanlı, 2019, p. 22). Some measurement and evaluation methods have strengths for measuring creativity. These methods are explained as follows.

Performance Assessment: During performance tasks, students are required to create a product or follow a process. Performance tasks can take various forms, ranging from creating long-term portfolios (Nitko and Brookhart 2014, p. 201).

Portfolio Assessment: Portfolios are a folder in which students record the products they produce during the process. A well-structured portfolio can contain students' best work (Nitko and Brookhart 2014, p. 236).

Project: Even though it is considered a type of extended performance assessment, in projects students work on a topic of their choosing. Projects allow students to work comprehensively and long-term (Bıçak, 2016, p. 226).

These measurement techniques are based on a long process, allow for group work and make it possible to evaluate the process and the product together. In this respect, these techniques can be used in the assessment of creativity and innovation skills. It may be useful for teachers to assign process-based tasks in which students can demonstrate their creativity and innovation skills and direct them to group work. Thus, the teacher will be able to follow these skills on a process-based basis and the resulting products will become permanent. It can be said that techniques such as multiple-choice tests and short-answer questions will be limited in evaluating students' creativity and innovation skills.

Research on Creativity and Innovation in Social Studies Education

Evaluating the studies related to creativity and innovation in the literature in social studies education is important for the improvements to be made regarding these skills. From this point of view, determining the focus and orientation of the research will contribute to revealing the limited areas. In Table 2, the studies conducted in this context are explained both in Türkiye and internationally.

Table 2

Some Research on Creativity and Innovation in Social Studies Education

Kaynak	Amaç
Yiğit & Erdoğan (2008)	To determine the effect of using the storytelling method in social studies course on 6th-grade students' creative thinking levels.
Çelik (2015)	To investigate the effect of using creative thinking activities in social studies courses on 7th-grade students' course achievement and attitudes towards the courses.
Gürkan & Dolapçıoğlu (2020)	To examine the effect of creative practices in social studies courses on students' creativity skills.
Öztürk (2010)	To determine the extent to which 6th-grade students' achievement increases in social studies course units in which creative thinking skills are used.

Emir vd., (2004)	To determine the creativity levels of pre-service social studies, preschool, science, and mathematics teachers
Arcagök (2016)	To determine the relationship between fourth-grade students' perceptions of autonomy support in social studies course and motivation, entrepreneurship, and creativity.
Ucus (2018)	Determining teachers' views and comments on how to develop creativity in social studies courses.
Cho, Chung, Choi, Seo, & Baek (2013)	To identify through observations, teacher and student interviews how creativity emerges in social studies and science classes in South Korea.
Aljughaiman & Mowrer-Reynold (2005)	To determine primary school teachers' beliefs, attitudes, and classroom practices related to creativity
Kurtuluş (2015)	Questioning teachers' and students' perspectives on innovation and their competencies.
Sarı & Kartal (2015)	Examining pre-service social studies teachers' attitudes towards technology use in terms of individual innovativeness levels and some other variables.
Demir & Özyurt (2021)	To examine the social studies curriculum and textbooks in the context of 21st-century skills based on the P21 framework.

When Table 2 is examined, it is seen that the researches on creativity and/or innovation skills in social studies education is at the level of survey research. In addition, there are a small number of studies in which certain teaching methods are tested. In general, it can be said that it would be useful to develop the following research on creativity and innovation skills in social studies education:

- The effect of interdisciplinary teaching, which is emphasized in the literature, on skills,
- The effect of the collaborative working method, which is emphasized in the literature, on skills
- Longitudinal and long-term research on skills
- Analysis studies determining the standards of the skill in teaching in Turkiye..

Based on the suggestions, it would not be too ambitious to say that the research field on creativity and innovation skills is still weak. The fact that creativity and innovation is not a skill that emerges out of nowhere creates the need for long-term research processes.

Conclusion

Creativity and innovation are essential skills for every citizen living in the 21st century. These skills are defined and standards are set by the P21 framework (The Partnership for 21st Century Learning, 2015). The fact that the social studies course is intertwined with life and

aims to raise citizens empowered with skills makes it important for the development of creativity and innovation. There are objectives in the social studies curriculum to acquire these skills. However, the small number of outcomes and the fact that they are compressed into certain themes are clearly in the MoNE (2023) curriculum. There are also some limitations in the research on creativity and innovation. Among these, the scarcity of experimental research can be exemplified. The development of creativity and innovation skills is both possible with different perspectives and requires collaboration. In this context, the advantages of interdisciplinary teaching Jacobs (1989a) should be utilized. For this purpose, the activities in the social studies course should be associated with other courses. Another important point is that the activities should be designed in a way that enables students to acquire the skills of working collaboratively. There are international collaborations to promote creativity and innovation in social studies. The most important of these is the collaboration between P21 and NCSS. In this way, creativity and innovation can be developed within the subject area of social studies. In conclusion, the social studies course offers unique opportunities to foster creativity and innovation. To develop this, research on social studies should be diversified and added to the literature.

Practice Template

Course: Social Studies
Class: 7
Subject: Climate Change
Recommended duration: 120 minutes
Standard: Develop ideas for solving global problems with *friends (Global climate change, natural disasters, hunger, terrorism, and migration will be discussed).*
Materials If Available: Smartboard
Learning Environment: Classroom

Preparing for the Activity
Duration: 20 Minutes

Inform the students that global problems will be discussed during the course and that you want to start with the problem of climate change. Create a discussion environment by asking students what the global problem means. Then write climate change in the center of the board. Then start a brainstorming session by asking students to think of climate change. After receiving enough answers, ask the students to define climate change using what is written on the board.

Implementing the Activity
Duration: 80 Minutes

To enable students to form an opinion on climate change, the activity process will be handled with the dimensions of the causes and consequences of climate change. First of all, start the discussion process by asking students what the causes of climate change might be. Then, open the video titled "What is Climate Change?" prepared in cooperation with MoNE and TEMA Foundation on the smart board. After the video is completed, ask students to summarize the video in their notebooks. At the end of the process, ask some students to read the summary

they prepared. The students, state that the causes of climate change are energy, industry, agriculture, deforestation, and transportation. Then question them one by one and discuss what kind of activities in these areas can cause climate change. Then follow the explanations below for each area.

Energy: "Think of our telephones, television, and computers. They need electricity to work. So how is electricity produced? Most of the electricity is produced from non-renewable energy sources, that is, electricity is obtained by burning fossil fuels. The gases emitted by fossil fuels damage our atmosphere." expressions with the students. Discuss with the students in which areas electricity is used other than tools such as telephones and computers. Start a question-answer process about how else the energy sector can cause climate change.

Industry: Similar to the energy sector, share with the students that the gases produced during production in the industry can cause climate change. Then ask students the following question. "We have learned that industrial fumes trigger climate change. Which products produced in the industry do we consume in our daily lives? How do you think industrial production takes place in our daily lives? After discussing the question with the students, move on to the next area.

Agriculture: Share with the students that the gases emitted by the vehicles used in the agricultural sector can cause climate change, and that the role of forests in cleaning the air is not efficient enough by reducing forest areas for agriculture. Also, point out that the packaging and transportation of agricultural products, until they reach our table are also factors that cause climate change.

Deforestation: Remind that forests provide oxygen to our world by reducing carbon dioxide gas. Explain that reducing forest areas may cause an increase in carbon dioxide, one of the harmful gases that cause climate change. Then discuss in the class for which reasons forest areas are decreasing.

Transportation: Explain that the gases released by cars and public transportation due to the use of fossil fuels trigger climate change. Discuss the environmental impacts of electric vehicles, which have recently become popular.
After completing this part, randomly divide the students into five groups. For this, have the students say the numbers 1, 2, 3, 4, 5, 1, 2... respectively. Decide that the students who say the same number will be in the same group. Arrange the desk so that five different groups can work. Then design a paper similar to the worksheet in Appendix 1. Distribute five printouts on A3 paper, one for each group. Tell the groups to examine the worksheets and that everyone will work on one of the areas affecting climate change mentioned in the lesson. Randomly distribute the five areas to the groups. Then tell the groups to design a collaborative project to reduce the effects of climate change within the scope of the area they have addressed. Tell them to proceed by answering the questions on the worksheet to design the project. Ask them to indicate if they think any questions are not understood. Then ask the groups to start working. Allow one-course hour for the study. At the beginning of the new lesson, invite the groups to the board respectively. Ask the groups to introduce the project they commonly designed to the class. class in a common way. After the presentation of each group, ask your classmates to evaluate the project.

Evaluation of the Activity
Duration: 80 Minutes

During group work, observe the groups by visiting them. Note down your observations, especially within the scope of the value of cooperation and respect. Ask all student groups to stand up to the board in turn. Ask the groups to present their work on the board. Ask other students to express their comments so that the presented groups can be assessed by their peers.

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ANNEXES:

ANNEX-1: Worksheet (You can increase the spaces allocated for the answer to use the paper efficiently)

WORKSHEET

Group Name: (Give your group a name)

Mark the area where the group will work:

A. Industry,
B. Agriculture,
C. Deforestation,
D. Transportation,
E. Energy

1) How would you describe the field you are addressing?
……
……

2) What are the impacts of the area you are addressing on climate change??
……
……
……

3) Design a project to reduce or mitigate the impact of the area you are addressing on climate change. Fill in the list below about the project you have designed:

- What are the problems caused by the impact of climate change in the area you are dealing with?
  ……
  ……
  ……
- Describe the project you designed to reduce or eliminate the impact of the area you are dealing with on climate change.
  ……
  ……
  ……
- Explain what benefits your project will provide if realized.
  ……
  ……
  ……

You can describe your project by making a drawing:
…

CONNECTIONS:

URL-1: https://www.youtube.com/watch?v=aGYjEyHBUTA

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CHAPTER 5: COMMUNICATION: A SAMPLE ACTIVITY FOR SOCIAL STUDIES

Res. Asst. Yıldıray KARADAĞ

Introduction

In the 21st century, the rapid development of information and communication technologies have contributed to the globalization of business activities in the World, the increasing importance of the international economy, the increasing importance of information, mobility and collaboration in core business competencies, and the continuous transformation of individuals' lives, working and learning styles (Dunning, 2000; Voogt & Roblin, 2012). This transformation process has also made the questions of what educational goals should be and how these goals can be achieved more important than ever (Wells & Claxton, 2002). In many countries, education is now seen as a golden ticket that provides the skills needed to participate and thrive in the global economy and will determine the health, wealth, and prosperity of the country in the future (Trilling & Fadel, 2009). Therefore, an increasing number of business leaders, politicians and educators are uniting around the idea that students need "the 21st century skills" to succeed today (Rotherdam & Willingham, 2009).

There are many sources in literature on the definition and classification of the 21st century skills. The P21 Framework for the 21st Century Learning defines the 21st century skills as learning and innovation skills, information, media and technology skills, and life and career skills that individuals need to adapt to a globalized world and to achieve success in the competitive labor market (Battelle for Kids, 2019). In another definition, van Laar, van Deursen, van Dijk and de Haan (2020) define the 21st century skills as skills related to education and the workplace. Voogt and Roblin (2012) defined the 21st century skills as the skills needed for individuals to adapt to the 21st century realities and conditions and to contribute to the information society as an effective citizen.

The P21 Framework for 21st Century Learning (Battelle for Kids, 2009a) categories the 21st century skills into three groups: i) learning and innovation, ii) information, media, and technology, and iii) life and career. Under learning and innovation skills, it is stated that students should develop creativity, innovation, critical thinking, problem solving, communication and collaboration skills. In addition, information, media, and technology skills emphasized that students should acquire information, media, information, and communication

technology literacy skills in a transforming world. In another category, life and career skills, competences such as flexibility, initiative, self-motivation, management, and orientation were mentioned. Another internationally recognized study in which the 21st century skills are classified comprehensively belongs to Assessment and Teaching of the 21st Century Skills (ATC21s). ATC21s categorized the 21st century skills under 4 categories: i) ways of thinking, ii) ways of working, iii) tools for working and iv) living in the World. Under these categories, skills such as creativity, innovation, critical thinking, problem solving, decision-making, learning to learn, metacognition, communication, collaboration, information literacy, ICT literacy, citizenship, life, and career are discussed (Binkley et al., 2012). In another categorization, Organisation for Economic Co-operation and Development (OECD) (Ananiadou & Claro, 2009) evaluated the 21st century skills within the scope of knowledge, communication, ethics, and social impact skills.

When the definitions and classifications of the 21st century skills are examined, it can be said that there are many dimensions that overlap with the main objectives of the Social Studies Course. The primary aim of the Social Studies Course is to provide students with the ability to make informed and reasoned decisions by protecting cultural diversity and democratic structure in a globally interdependent world (National Council for Social Studies [NCSS], 1994). In addition, the Social Studies Course includes study areas corresponding to one or more disciplines in themes such as culture, time, continuity and change, people, places and environments, individual development and identity, power, authority and governance, production, distribution and consumption, science, technology and society, global connections, citizenship ideals and practices (NCSS, 2010). Therefore, the Social Studies Course addresses many skills that are considered within the scope of the 21st century skills and aims to provide these skills to students through related disciplines.

In this section, communication skill, which is widely accepted as one of the 21st century skills, will be discussed. Although communication skill has gained new dimensions today, it is one of the basic components of the development of human beings from past to present and its importance increases day by day. Since the first civilizations, people have used different elements of communication (verbal, written, body language, symbols, etc.). Today, communication has gained a different dimension with the development of technology and new channels have emerged where millions of people can communicate with each other quickly through various channels such as televisions, newspapers, internet resources, social media tools, which we call mass media. This situation has made it important to redefine the

dimensions and scope of communication skills and to reveal their requirements. In this context, in the following sections, we will discuss the definition of communication and basic concepts in communication, communication skills, the importance of communication skills in the Social Studies Course and communication skills in the Social Studies Curriculum.

Definition of Communication and Basic Concepts in Communication

When the origin of the word communication is analyzed, it can be said that it derives from the Latin words "communis" and "communicare". While communis means common, community or sharing, communicare is a verb meaning 'o do something in common (Oxford English Dictionary, 2023). However, there are various definitions of the word communication by different people and organizations. For example, in the Cambridge Dictionary, communication is defined as *"the act of communicating with other people"*, *"a message sent to someone by letter, e-mail, telephone, etc."* and *"conveying information by an action or means"* (Cambridge Dictionary, 2023). In the Turkish Dictionary of the Turkish Language Association (2023), communication is defined as *"the transfer of feelings, thoughts or information to others by any conceivable means, communication, communication and communication"*. In addition, Kreitner, Kinicki and Buelens (2002) defined communication as the process of exchanging information between people and making sense of information. Zıllıoğlu (2007) also defined communication as the transfer of information, thoughts or feelings through symbols agreed between people. Therefore, based on all these definitions, it can be said that communication is the transfer of information, emotions, thoughts, opinions and views through various tools and the provision of individual and social interactions.

Another structure that needs to be addressed to understand communication is the elements of communication. There are basically five elements of communication: source, message, channel, target, and feedback (Demirel, Seferoğlu ve Yağcı, 2001). When evaluated in terms of the basic elements of communication, communication is completed with a sharing process that is completed by the source turning his/her knowledge, feelings, thoughts, or opinions into a message and directing it to the target through various means and the feedback given by the target person receiving the message (Güven, 2016). Therefore, communication is initiated by the source and the source is the sender of the message. This source can sometimes be a person, sometimes a group or the whole society. However, a source is absolutely needed for communication to take place (Yüksel, 2016). The message is the information, emotion, thought or opinion that the source encodes and delivers to the receiver (Tuna, 2014). The structure of the message can be simple or complex. For example, a greeting, a sign, a picture,

clothes, walking style, moving, or not moving, etc. everything can be evaluated within this framework (Kırmızı, 2006). The channel, on the other hand, can be defined as the means on which the message is loaded during the sharing process between the source and the receiver of the messages consisting of information, feelings, thoughts, or opinions that the source wants to convey (Demiray, 1994). Therefore, the channel can be television, radio, newspaper, book, magazine, writing, speech, body language, etc. (Güven, 2016). The target, which is another element, is the recipient of the message sent by the source person. In other words, it is the address of the messages, and this address can be a person, institution, or community (Tuna, 2014). The last element of communication is feedback. Although feedback is considered as the last element of communication here, it can be stated as the most important element for the realization of a healthy communication. Because feedback is a response to the incoming message, and thanks to feedback, the source person can control and correct himself/herself (Arslanoğlu, 2018). At this point, it is possible to consider feedback as the control mechanism of communication. Feedback can cause the target and source roles to change with the feedback given by the target. This shows that the process of communication involves a continuous transformation and circularity (Tuna, 2014).

Apart from these elements, communication also has certain types. These can be classified as i) intrapersonal communication, ii) interpersonal communication, iii) intra-organizational communication, iv) mass communication (Dökmen, 2021). Intrapersonal communication is the process of individuals evaluating certain messages in their own inner worlds and performing a certain behavior according to this evaluation (Yatkın & Yatkın, 2020). Intrapersonal communication may involve the individual thinking, talking, getting angry with himself/herself or others, sulking, having arguments or making up. At the same time, it can also be the individual trying to solve the problems he/she has determined within himself/herself or making plans (Erdoğan, 2011). Interpersonal communication can be defined as the communication between two or more people. Interpersonal communication is the type of communication that individuals use most frequently in the social field. Although this communication is mostly face-to-face, it can also be carried out using different technological tools in the light of today's developments (Güven, 2016). Intra-organizational communication, which is another type of communication, is the communication of people working in an organization in the light of predetermined tasks to realize the functioning and goals of the organization (Dökmen, 2004). Therefore, in intra-organizational communication, it can be said that the target audience of communication is limited to the messages sent and received within

the organization (Mutlu, 1998). Another type of communication is mass communication. Mass communication is the mass transfer of predetermined multidirectional messages to a community consisting of many people who do not have strong and effective communication between them (Güven, 2016). According to another definition, mass communication is the process of transmitting the content prepared for certain goals to large groups of people and interpreting it by these people (Dökmen, 2004).

Communication Skills

Today's business environments employ individuals who can fulfil more complex and interactive tasks rather than individuals with only occupation-specific skills. This situation requires employees to possess or be equipped with certain skills for employment (Suarta, Suwintana, Sudhana, & Hariyanti, 2017; van Laar et al., 2017). In addition, the emphasis on information and information services has contributed to the increasing importance of some skills for information sharing (Ledward & Hirata, 2011). One of these skills is communication skill. Communication skill basically has a structure that concerns all humanity and even all living things. This is because many things such as the national and international cooperation of individuals and societies, the production of new ideas, the solution of problems encountered, ensuring harmony and peace, and carrying out the necessary work for the protection of nature and other living things require a healthy and level communication skill and ability. In his visit to Cornell College on 15 October 1962, Martin Luther King said *"... I am convinced that men hate each other because they fear each other. They fear each other because they don't know each other, and they don't know each other because they don't communicate with each other ..."* speech presents the issues we have just discussed about communication from a different perspective (Cornell College, 2023). Therefore, the importance of communication skills can be evaluated from this perspective.

In the related literature, many studies have been conducted to determine the definition and the scope of communication skills. In these studies, studies conducted by institutions, organizations or project teams such as Battle for Kids, ATC21s, OECD, Council of Europe, International Labour Organization and An Economist Intelligence Unit can be stated as internationally accepted and prominent studies (Battle for Kids, 2019; Binkley et al., 2012; Ananiadou & Claro, 2009; Council of Europe, 2016; Aggarwal, 2021; Kenworthy & Kielstra, 2015). The Framework for the 21st Century Learning prepared by the Partnership for the 21st Century Learning defines communication skills as listening, speaking, storytelling, and sharing thoughts and ideas. In addition, the 21st century learning outcomes for K-12

communication skills are discussed under five headings These are as follows (Battle for Kids, 2019).

i) expressing thoughts and ideas effectively using verbal, written and non-verbal communication skills in a variety of forms and contexts,

ii) listening effectively to decipher meaning, including knowledge, values, attitudes, and intentions,

iii) using communication for various purposes (e.g., to inform, instruct, motivate, and persuade),

iv) using multiple media and technologies and know how to evaluate their impact as well as theoretically assess their impact (for higher grade levels),

v) communicating effectively in different settings (including multilingual).

Another important study on the scope of communication skills was addressed in the ATCS21S project and communication skills were divided into three groups: knowledge, skills, and attitudes/values/ethics (Binkley et al., 2012). These are as follows.

Table 1

Ways of working-communication

Knowledge	**Skills**	**Attitudes/values/ethics**
Competency in language in mother tongue.	*Competency in language in mother tongue an additional language/s.*	*Competency in language in mother tongue.*
• Sound knowledge of basic vocabulary, functional grammar and style, functions of language. • Awareness of various types of verbal interaction and the main features of different styles and registers in	• Ability to communicate, in written or oral form, and understand, or make others understand, various messages in a variety of situations and for different purposes. • Communication includes the ability to listen to and understand	• Development of a positive attitude to the mother tongue, recognizing it as a potential source of personal and cultural enrichment. • Disposition to approach the opinions and arguments of others with an open mind and engage in constructive and critical dialogue.

spoken language. • Understanding the main features of written language.	various spoken messages in a variety of communicative situations and to speak concisely and clearly. • Ability to read and understand different texts, adopting strategies appropriate to various reading purposes and to various text types. • Ability to write different types of texts for various purposes and monitor the writing process. • Ability to formulate one's arguments, in speaking or writing, in a convincing manner and take full account of other viewpoints, whether expressed in written or oral form. • Skills needed to use aids to produce, present, or understand complex texts in written or oral form.	• Confidence when speaking in public. • Willingness to strive for aesthetic quality in expression beyond the technical correctness of a word/phrase. • Development of a love of literature. • Development of a positive attitude to intercultural communication.
Competency in additional language/s.		*Competency in additional language/s.*
• Sound knowledge of basic vocabulary, functional grammar and style, functions of language. • Understanding the paralinguistic features of communication. • Awareness of societal conventions and cultural aspects and the variability of language in different geographical, social, and communication environments.		• Sensitivity to cultural differences and resistance to stereotyping.

Note. Adapted from Binkley et al., (2012, p. 45)

When Table 1 is analyzed, it is seen that the knowledge dimension under the communication skill focuses on proficiency in mother tongue and other languages. In the knowledge dimension in mother tongue and other languages, individuals' acquisition of basic vocabulary, functional grammar and style and knowledge about the functions of language, awareness of various types of oral interaction and styles, and understanding the basic features

of written language are addressed. However, in the knowledge dimension, unlike proficiency in other languages, individuals are expected to gain awareness of the variability of language in geographical, social and communication environments, as well as traditions and cultural elements. In the skills dimension, it is stated that individuals are expected to have the ability to communicate orally and in writing in their mother tongue and other languages, to understand various messages and to enable others to understand them, to read and understand different texts for various purposes, to write different types of texts, to explain their arguments persuasively while speaking and writing, to consider other points of view, and to use auxiliary tools to produce, present and understand written and oral texts. The attitudes, values and ethics dimension is analyzed in two dimensions: mother tongue and other languages. In the mother tongue dimension, the main aspects are: developing a positive attitude towards the mother tongue, accepting the mother tongue as a potential source of personal and cultural enrichment, approaching the views and arguments of others with an open mind and engaging in constructive and critical dialogue, self-confidence in public speaking, striving for aesthetic quality in the expression of a word/sentence, developing a love of literature and developing a positive attitude towards intercultural communication. In the other languages dimension, sensitivity to cultural differences and resistance to stereotyping were emphasized (Binkley et al., 2012).

Another study on the definition and scope of communication skills belongs to OECD. According to OECD, communication skills are important in preparing students not only as lifelong learners but also as members of a larger community with a sense of responsibility towards others. In this context, communication skills are considered as i) effective communication and ii) co-operation and virtual interaction. In the effective communication dimension, the main emphasis is on individuals using appropriate tools for communication, using correct language, paying attention to other issues that consider the context of effective communication, developing information and media literacy and critical thinking skills. In the dimension of collaboration and virtual interaction, performing collaborative work inside and outside the school, critical thinking and providing feedback on the work of others, creating learning communities, digital cultural participation, and participation in virtual friend groups (Ananiadou & Claro, 2009).

In another study conducted to determine the scope of communication skills, Council of Europe (2016) defines communication skills as the skills necessary to communicate effectively and appropriately with other people. In this context, it states that individuals should have

competences in 8 thematic areas. These competences are i) the ability to communicate clearly in a variety of situations, ii) the ability to meet the communicative demands of intercultural situations by using more than one language and language varieties, iii) the ability to express oneself confidently and without aggression even in disadvantaged situations, to express disagreement with another person in a way that respects their dignity and rights, iv) the ability to recognize different forms of expression and customs used by other social groups and cultures, v) the ability to adjust and modify one's communicative behavior in a way that is appropriate to the cultural context, vi) the ability to ask appropriate and sensitive questions when identifying messages expressed by another person where meanings are unclear or inconsistent, vii) the ability to manage communication interruptions by rephrasing, revising and simplifying the message in case of problems encountered in communication and viii) the ability to be a linguistic mediator in intercultural communication.

In the International Labour Organization's Global Framework on Core Skills for Life and Works in the 21st Century, communication skills are considered under social and emotional skills. In this study, communication skill is defined as the ability to listen effectively to decipher meaning, express thoughts and ideas effectively, exchange information, and express opinions, desires, needs, and fears using verbal, written and non-verbal skills for a range of purposes in a variety of settings (Aggarwal, 2021). The Ministry of National Education (2023) categorized communication skills as language and communication skills. In this context, i) communication in mother tongue and foreign languages, ii) negotiation and iii) effective listening. Communication in mother tongue and foreign languages is defined as the ability of individuals to express their feelings, thoughts or ideas in their mother tongue or other foreign languages in a simple and clear way using various tools and to communicate effectively. Negotiation, on the other hand, is considered as the ability to discuss a certain feeling, thought or idea and to discuss possible solutions by using logic and persuasion and to reach an agreement on these feelings, thoughts, or ideas. The effective listening dimension is defined as the ability to listen effectively and actively by paying attention to the thoughts, behaviors, sensitivities, and body language of individuals to understand and assimilate the information, thoughts, and values of the individuals with whom one is in communication.

The Importance of Communication Skills in the Social Studies Course

One of the important functions of education is to raise the child as a good citizen, to socialize the child, to get to know the culture, history, and institutions of the society in which s/he lives, and to acquire the behaviors required by his/her roles in society. Thanks to these

functions, education ensures that societies gain continuity and become happy and productive. In today's societies where social institutions and relations have developed, children need to learn about human relations, the fact that people can have differences, formal and informal groups in society and their functions, and institutions ranging from the smallest unit of society, the family, to large organizations such as the government and the state. Not only the family but also the education the child receives is of great importance in acquiring this knowledge, acquiring behaviors and socialization. Social Studies is one of the courses of the education system that directly aims at adapting to social life and being compatible with people and institutions within the social structure (Erden, undated).

Social Studies is the integration of social and human sciences to develop citizenship competences. This integration provides a coordinated and systematic field of study by drawing on appropriate content from the disciplines of the humanities such as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as mathematics and natural sciences. The primary goal of the course is to help young people make informed and rational decisions for the common good as citizens of a culturally diverse and democratic society in a world that is interdependent in many ways (NCSS, 1992). Social Studies is a course structure that focuses on the adaptation of individuals to society, in other words, the socialization of the individual. With this course, which attaches importance to the acquisition of social and participatory skills, it is aimed to enable students to see the integrity of life and society, to teach them the meaningful information they need in their lives, and to raise them as good citizens who are beneficial to their country and society (Kaya, 2021). Social Studies, which is a field of study on human beings (Zarillo, 2016), makes it a priority to give students an identity and to teach them the knowledge and skills they may need to adapt to society. One of the basic skills necessary for human socialization and integration with the society in which they live is communication.

Communication is a skill that regulates and facilitates all kinds of human relations and relationships in every professional field. In general, communication skill includes being sensitive to verbal and non-verbal messages, listening and reacting effectively (Korkut, 2005). Communication skill, which enables people to be together and in harmony, can be considered as a complementary element of social life and one of the basic needs of human beings. Developing communication skills, which is a part of our lives, and ensuring the ability to communicate correctly provide many benefits to individuals. Considering the socialization and socialization objectives of the Social Studies Course, communication skill can be

considered as one of the basic skills that this course aims to provide.

In terms of its structure, the Social Studies Course and communication skills are two intertwined structures. Communication skills are also included in the themes that make up the Social Studies Course and which are set out by the NCSS (1992). Accordingly, the Social Studies Course aims to enable students to analyze people, places, and environments and to understand the relationship between human communities and the physical world. The course, which deals with the communication networks that connect different groups of people, the causes, and effects of these networks, aims to enable students to understand the interaction of people with their environment and to understand the changing complex processes between people and their environment. The course aims to educate students as individuals with strong communication skills who can exist effectively in social life, to construct personal identity, to regulate the experiences shared by the individual with groups and institutions, to ensure the development of the individual in social and cultural terms, to examine and understand human behavior.

The Social Studies Course, which aims to provide students with the communication skills necessary for students to live together by organizing their social relations, aims to facilitate students' adaptation to their expanding environment starting from the secondary school level. In an increasingly developing and changing global world, the transformation of societies, the increase in population and the transparency of borders have increased the need of people for each other, which has further revealed the importance of being able to communicate, express oneself and understand each other. At this point, there is a great need for the development of communication skills in the Social Studies Course, which aims to improve the social adaptation process.

Communication Skills in the Social Studies Curriculum

Developments in science and technology and the changing needs of the individual and society have made it necessary to make some innovations in teaching and learning processes. Curricula are being updated to raise individuals who produce knowledge, use it in their lives, are useful to their country and the world, think critically, are entrepreneurial, determined, and have communication skills. One of these updates occurred in the Social Studies Curriculum in 2018 (Ministry of National Education, 2018).

In the changing the Social Studies Curriculum, the aim of developing students' communication skills and enabling them to use these skills actively in their lives is directly seen

in many elements of the curriculum. In the competencies section of the program, the skills that students will need in their personal, social, academic, and business lives at both national and international levels are identified in the Turkish Qualifications Framework. These competences include communication in mother tongue and foreign languages. Accordingly, it is important for students to express and interpret concepts, thoughts, opinions, feelings, and facts both orally and in writing, and to interact linguistically in an appropriate and creative manner in their educational, professional, and social environments. Communication competence in foreign languages, on the other hand, is considered important to develop students' proficiency in a foreign language in addition to their ability to communicate in their mother tongue and to enable them to learn different languages and use them in appropriate forms of communication in all their environments. In addition, it is aimed to be able to use information and communication technologies critically to communicate by gaining digital competences among the competences and to teach communication over common networks in the right way. In cultural awareness and expression competence, it is aimed to enable students to express their opinions, experiences, and feelings creatively by using communication skills through mass media.

Among the specific objectives of the Social Studies Course, the statement *"To use information and communication technologies consciously by comprehending the development process of science and technology and its effects on social life"* is included. The aim of this special purpose of the Social Studies Course is to teach students to use information and communication technologies and social networks consciously and correctly by seeing that communication can also be provided in these environments in the rapidly developing age of science and technology. It is considered important for students to be able to use their communication skills in technological environments that contain important communication tools of the age we live in. The communication skill, which is also a function of ensuring socialization, which is one of the objectives of the Social Studies Course, appears in the special objectives of the program with the statement of aiming to enable students to *"use basic communication skills and basic concepts and methods of social sciences to regulate social relations and solve the problems they face".* It is aimed to enable students to gain and use basic communication skills for all kinds of situations and problems that they may encounter in their education, work, and social lives, and to use the individual and social skills gained by social sciences while doing these applications.

Communication, which is one of the basic skills that the curriculum aims to provide students with, is integrated into the course content in the learning areas that constitute the

interdisciplinary structure of the curriculum that organizes learning. Communication skill can be seen as having direct content in the learning areas of Individual and Society, People, Places and Environments and Global Connections. With the Individual and Society learning area, it is aimed to teach students to exist as an individual and a community in social life and to develop appropriate forms of communication by making use of the subjects of psychology and sociology to live harmoniously within these structures. In the learning area of People, Places and Environments, it is aimed to provide students with the basic spatial knowledge, skills, and values necessary for human life, and to bring people who can communicate with the whole world because of technological developments to an effective position in this world. In the Global Connections learning area, it is aimed to teach students the existence of elements such as beliefs, ideas, people, capital, information, and technology that reach everywhere by crossing borders in today's global world and to raise individuals who can cope with the problems and situations they face in this network of relations through communication channels and tools.

In the Global Connections learning area in the 4th grade level of the Social Studies Curriculum, it is seen that content is included to improve students' communication skills. In this section, which includes comparing the cultural elements of different cultures with the cultural elements of our country, visual and written communication tools, and issues such as clothing, food, games, family relations are tried to be conveyed to students. By including examples from local and national cultural elements and communication tools, students are enabled to see various examples from different countries and their own countries. In the Individual and Society learning area at the 5th grade level of the curriculum, it is aimed for students to behave in accordance with the duties and responsibilities required by the roles they take in the groups they participate in as an individual who is aware of their rights. In addition, students are expected to plan their own time and make careful planning by creating an appropriate level of space for the time they will spend in mass media. It can be said that it is aimed to ensure that the time spent in mass media, which is one of the ways of communicating today, is organized in a planned and careful manner. Again, in the 5th grade Global Connections learning area, it is aimed for students to discuss the impact of communication and transport technology on economic relations between countries. When we look at the 7th grade Individual and Society learning area, it is seen that it is aimed to gain communication and media literacy skills directly. In this learning area, it is aimed to teach students to analyze attitudes and behaviors that affect communication, to question their own attitudes and behaviors in this context, and to use positive communication methods in individual and social relations. In addition, the role of the media in

social change and interaction and its influence on individual communication and social culture through communication channels such as television, internet, smart phones are discussed. This subject, which aims to enable students to act appropriately by knowing their rights and responsibilities while using communication tools, also includes the relations between freedom of expression of thought, the right to receive accurate information and freedom of mass communication.

Communication skill, which is included in many sections of the Social Studies Curriculum such as general aims, special aims, points to be considered and learning areas, is one of the skills that students should acquire directly. Communication skill is addressed from various perspectives in the program. Accordingly, this skill primarily aims to enable students to participate as a part of the society in which they live in daily life and to exhibit positive and constructive communication skills. In addition, the importance and effectiveness of communication in relations between countries other than their own lives are included. The importance of communication skills from another perspective has been tried to be gained to students through many media tools and broadcasting organs that we encounter in the digital age. It is aimed to benefit students at the point of establishing correct communication in mass media, planning the time spent here effectively and knowing their rights and responsibilities.

Conclusion

The 21st century is accepted as the beginning of the digital age due to the great developments in technology and the information density. As a result of the changes and developments brought about by this age, which is difficult to keep up with the speed as humanity, it becomes a necessity for the individual to undergo some changes (Beers, 2011). Accordingly, 21st century skills that enable people to achieve success and satisfaction both in business life and in education and social life have been created. Some global competences such as being able to catch the changing conditions and intensive information flow, being open to innovations, thinking critically, solving problems, having strong communication skills, being able to cooperate, and having advanced information and technology literacy can be listed (Battele for Kids, 2009b). As one of the 21st century skills, communication skills enable individuals to establish and maintain positive relationships, to develop their relationship networks in their business life, to acquire a network, and to express their ideas correctly. The development of communication skills, which means being able to express ideas by using verbal, written and non-verbal communication elements effectively, being a good listener, and being open to foreign language acquisition, is seen as a need expected from individuals

(Battele for Kids, 2015).

The education received in the acquisition of the 21st century skills by individuals shows an important mediation. As a matter of fact, it is seen that 21st century skills are included in all curricula at primary and secondary education level in our country. Social studies is one of the courses with this content (Özdemir Özden, Karakuş Tayşi, Kılıç Şahin, Demir Kaya, & Bayram, 2018; Tünkler, 2022). Social Studies is a course that increases the social interaction and communication of students, which includes different disciplines related to past and present human social life to socialize students and prepare them for life (Aslan, 2016). The Social Studies Course has a structure that is intertwined with daily life and brings social events, facts, and concepts that students may encounter in their lives within the scope of the course. The Social Studies Course, which cares about developing students' interpersonal and group skills such as working with groups, discussion, listening, taking the role of leader or follower in a group, and participation (Öztürk, 2012), enables students to take an active role in social life by improving their communication skills.

An Activity Example for Improving Communication Skills in the Social Studies Course

In this section, an example of an activity prepared by the author to develop communication skills in the Social Studies Course is given.

Application Template
Course title: Social Studies **Class:** 7 **Topic:** Effects of communication tools on human and society **Recommended duration:** 3 lesson hours (120 minutes) **Achievement:** SB.6.6.1. Compares different forms of government in terms of the basic principles of democracy. **Materials:** Notebook, pencil, infographic, train sound, crayons, cardboard paper. **Environment:** Classroom
Preparation for the Event **Duration** 40 Minutes
• The teacher tells the students that they will do the "I think-we think" activity and introduces the activity. • Students are asked to draw two columns in their notebooks. They write "I think" on the left side of the column and "we think" on the right side. • Students are given an infographic with information about the basic principles of democracy and different forms of government (monarchy, oligarchy, theocracy, and republic) and asked to analyze this infographic.

- The students are asked "What is the importance of the basic principles of democracy?" and "Which of the basic principles of democracy are applied in different forms of government?".
- Students are asked to write the answers to the questions in the "I think" section based on their own thoughts.
- After all students have written their answers, they share their thoughts with their friends on a voluntary basis.
- They are asked to listen actively to the thoughts of their fellow students and then they are asked to write down the information they have obtained.
- After the writing process is finished, a general evaluation is made by the teacher and the activity is finalized.

Implementation of the Activity
Duration 40 Minutes

- The teacher tells the students that they will do the "Station" activity and introduces the activity.
- In the station activity, students are told that they will prepare posters, slogans, stories, and pictures to compare different forms of government in terms of the basic principles of democracy.
- 4 station points are created as poster, slogan, story, and picture.
- A station chief is determined for each station and the other students are divided into 4 groups.
- The groups are asked to communicate effectively with each other and complete the activities in co-operation.
- The running time at each station is 5 minutes.
- The activity is started with the sound of a train and the activity is ended after the groups work at all stations.
- At the end of the period, the station chiefs bring the works to the board and the activity is finalized by making an evaluation by the class.

Evaluation of the Event
Duration 40 Minutes

- Students are asked to write a story comparing different forms of government in terms of the basic principles of democracy.
- In the story, it is requested to emphasize at least five of the key concepts such as "National sovereignty, equality, freedom, respect for human rights, the rule of law and participation" in the theme of basic principles of democracy and "Monarchy, oligarchy, theocracy and republic" in the theme of forms of government.
- The stories written by the students are evaluated using an analytical rubric.

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CHAPTER 6: COLLABORATION SKILL: A SAMPLE ACTIVITY FOR SOCIAL STUDIES

Res. Asst. Mehmet YAVAŞ

Introduction

Each period creates its own conditions. In the 21st century, changing life and conditions have created the need for a new human profile for every society. For this reason, every society has made some arrangements in order to meet the need for people who have the competence to adapt to the conditions required by the age. Education systems constitute the first element of this transformation. Because the education systems that will reveal the individuals needed by the age must also be suitable for the conditions of the age. Educational institutions aim to transfer the skills needed by the age to individuals. Within the scope of this goal, first of all, the conditions of the period should be well analysed and put forward. Today, skills are now at the forefront. Because every year, new professions and the need for people with new skills required by these professions arise. For this reason, in the 21st century, individuals need to gain some skills in order to adapt to the age and changing conditions. These skills that need to be acquired are called 21st century skills. Among these skills, collaboration skill is one of the most important ones. Communication and collaboration skills, which are called soft skills, are like a gateway to other skills that make up the 21st century skills. The main reason for this is that all other skills are based on communication and collaboration skills (Jacobson-Lundeberg, 2016). The main reason why communication and collaboration skills are generally considered together is that they are complementary to each other. Individuals can carry out many different studies to improve their collaboration skills in different environments and platforms, but they need to have strong communication skills for this. Although many different methods and techniques are used in teaching these skills, the important point is that they are skills that can be gained socially (Trilling & Fadel, 2009, p. 56). In this process, the social studies course undertakes this mission. Collaboration skill, which is among the basic skills aimed to be gained by students within the scope of the social studies course, is an important skill that individuals should have both in business life and in educational life. Individuals can develop solutions to the problems they may encounter in their lives by using collaboration skills and gain a preliminary preparation for gaining other skills they are expected to have in the 21st century. At the same time, in

accordance with the objectives of the social studies course, they gain the competence to work harmoniously and act together in social life.

21st Century Skills

Skill: It is the ability of a person to do a job skilfully and easily by making a physical or intellectual effort (Turkish Academy of Sciences (TÜBA), 2011, p. 133). In the changing business and social life of our age, skills reflect the basic requirements for the problems and needs arising from these areas. These skills are primarily realised in a process in which education systems play an active role in meeting these requirements of the market and society. It is seen that it is necessary to have certain skills in certain periods of history. In particular, the need for people with the skills they need according to the conditions of each century has emerged. For example, the skills needed in the 19th and 20th centuries are listed as follows;

Table 1

19st Century Skills

- To be able to trade
- To be able to follow instructions
- Getting on well with others
- To be hardworking
- To be able to think professionally
- To be effective
- To be fast
- To be honest
- To be fair

Hamarat (2019, p. 8)

When we look at these skills, it can be said that most of them are the skills that are needed and actively possessed in social life today. However, in today's conditions, it is seen that they are not necessary skills in terms of priority. Because our age is a period of time that we call globalisation and the opportunities for interaction between people have increased a lot. At the same time, rapidly developing scientific and technological developments directly affect both business and social life. As a result of this interaction, the need for people with new skills emerges for many new business lines (World Economic Forum (WEF), 2023). Raising the human profile with the skills required by these sectors is a priority target for every country. On the other hand, it is a necessity to have these skills not only in terms of the labour market but also in terms of adaptation to social life. This is because changing times and conditions force

the social structure and the human profile suitable for this structure to transform. On the other hand, these skills do not consist of skill sets created in a systematic and planned manner and aimed to be acquired by individuals. Therefore, this is the main aspect that distinguishes 21st century skills from the skill sets of the past. Although skills teaching has a long history, it has not been a process of direct acquisition in the field of education. The teaching process, which started primarily in the industrial sector, was included in education systems in the 1960s. Afterwards, it spread rapidly and turned into a structure that puts the student directly in the centre with the effect of the constructivist approach (Güneş, 2012). Today, it has turned into a structure that is considered necessary to be taught all over the world as 21st century skills. For this reason, teaching these skill sets to individuals constitutes one of the main objectives of education systems in most countries.

Of course, the basic needs and expectations of each society differ. Especially the differentiation of the human profile demanded by the labour market has formed the basis for the differentiation of the skill sets created within the scope of the 21st century. For this reason, skill sets for 21st century skills have been put forward by different institutions and organisations. Today, the use of these skill sets is preferred according to the need. These skill sets are as follows;

Table 2

21st Century Skill Sets of Different Organisations

P21	EnGauge	ATCS	ISTE/NETS	EU	OECD
Learning and Innovation Skills	**Exploratory Thinking**	**Ways of Thinking**	**Creativity and Innovation**	**Learning to Learn Contact**	**Interaction with Heterogeneous Groups**
1. Critical Thinking and Problem Solving	1. Compliance, Complexity Management and Self-Governance	1. Creativity and Innovation	1.Creative Thinking, Knowledge Construction, Product Development and Technology Utilisation Processes	1.Communication in the Native Tongue	1.Good Relationships with Others
2.Creativity and Innovation	2. Curiosity, Creativity and Risk Taking	2. Critical Thinking, Problem Solving,	2.Critical Thinking, Problem Solving	2.Communication in a Foreign Language	2.Collaboration and Teamwork

		Decision Making	and Decision Making		
3.Communication and Collaboration	3. Higher Level Thinking and Reasoning	3. Learning Leadership, Metacognition	**Communication and Collaboration**	**Digital Talents**	3. Conflict Resolution and Management
Information, Media and Technology Skills	**Effective Communication**	**Ways to Work**	Using Digital Media and Environments for Students to Work and Communicate Collaboratively	**Cultural Awareness and Expression**	**Interactive Use of Tools**
1.Information Literacy	1. Team Spirit, Collaboration and Interpersonal Skills	1.Communication	**Technology Processes and Concepts**	**Social and Citizenship Related Competence**	1. Interactive Use of Language, Symbols and Writing
2.Media Literacy	2. Personal, Social and Civic Responsibility	2. Collaboration (Team Work)	Understanding Technology Concepts, Systems and Processes	**Initiative and Entrepreneurial Sense**	2. Interactive Use of Information and Science
3.Technology Literacy	3. Interactive Communication	**Study Tools**	**Research and Information Flow**		3. Interactive Use of Technology
Life and Career Skills	**Digital Age Literacy**	1.Information Literacy	Collection, Use and Evaluation of Information with Digital Tools		**Independent-Autonomous Behaviour**
1.Flexibility and Adaptation	1. Basic, Scientific, Economic and Technological Literacy	2. Information and Communication Technologies (ICT) Literacy	**Digital Citizenship**		1. Behaving in the 'Big Picture'
2.Entrepreneurship and Self-Management	2. Visual and Information Literacy	**Life on Earth**	Understanding Social and Cultural Issues Related to Technology		2.Creating and Managing Life Plans and Personal Projects
3.Social and Intercultural Skills	3. Multicultural Literacy and Global Awareness	1. Local and Global Citizenship			3. Asserting, Defending and Asserting Rights
4.Productivity and Responsibility	**High Productivity**	2. Life and Career			

5.Leadership and Responsibility	1. Managing, Planning and Prioritising Results	3. Individual and Social Responsibility			
	2. Effective use of daily life tools				
	3. Production Related Capability, High Quality Product				

Kotluk & Kocakaya (2015)

When we look at the classifications made, it is seen that most of the skills are common. The main difference between them emerges in their order of priority. Some skills come before others in terms of ranking. The reason for this situation is that the institutions and organisations that make skill sets and rankings create these skill sets in line with their needs targets. For this reason, the similarity rates between skill sets do not match each other. However, as a general acceptance, P21 (Partnership for 21st Century Skills) is accepted in the use of 21st century skill sets. The common point of criticism about 21st Century skills is that there is no framework for applying these skills in lessons and it is unclear how both teachers and students will be assessed on these skills (Bernhardt, 2015). For this reason, the lack of feedback on whether 21st century skills are acquired correctly raises doubts about the effective use of skills in life.

Another important point is that when we look at the classification of these skill sets, it is seen that almost all of them have collaboration skills as a common point. Especially in recent years, many sectors all over the world, especially education and business world, attach importance to collaboration skills (Lai, DiCerbo, & Foltz, 2017). In Turkey, it is seen that many plans and studies have been carried out to equip individuals with 21st century skills. The most well-known among these is the 2023 Vision Document put into practice by the Ministry of National Education in 2018. Within the scope of this document, targets for 21st century skills were also set. These goals are as follows;

Table 3

21st Century Skills in 2023 Vision Document

- In cooperation with higher education institutions, to open graduate level minor programmes for teachers in the fields needed to provide 21st century skills,
- To organise awareness and skill trainings on literacies, which are among the 21st century skills,
- To organise activities for 21st century skills to gain awareness and competence for individual and professional development together with social problem areas,
- Organising awareness and skills trainings on multiple literacies (such as digital, financial, health, ecology and social media, etc.), which are among the 21st century skills

Milli Eğitim Bakanlığı (MEB), (2018)

The acquisition of 21st century skills in primary and secondary school is necessary for learners to have the basic skills that they may need in the upper steps of the learning-teaching process and to have the skills in accordance with today's conditions, both in educational life and in business life; creative and critical thinking, collaboration with others, problem solving, communication skills and understanding the ways to access the information they need (Eryılmaz & Uluyol, 2015, p. 210; Tünkler, 2022). The most well-known 21st century skills are the skills called 4C (Beers, 2013). These skills, which are called Critical Thinking, Collaboration, Communication and Creativity skills, are among the basic learning skills that should be acquired primarily in schools.

Social Studies and Collaboration Skills

Collaboration is defined as a social process in which two or more people unite for a purpose and take a common attitude (TÜBA, 2011). In terms of its use in teaching environments, collaboration refers to "situations in which students can work together to solve problems or answer questions, participate effectively and respectfully in teams to achieve a common goal, and take joint responsibility for completing a task" (Jason Ravitz, English, & Megendoller, 2012, p. 3). Within the scope of P21, collaboration skill is defined as the ability to work effectively with people from different groups and with different perspectives (P21, 2015).

Another important point that distinguishes collaboration skill from other 21st century skills is that this skill is a skill that is not only present today but also in the past and is actively used in life. Most of the 21st century skills are important but not new skills. Among these skills, communication, critical thinking, collaboration and problem solving are skills that have emerged since the early ages and have survived to the present day. These skills are an integral

part of the human development process. According to Dede (2010), especially collaboration skill is a skill that has existed in nature for a long time, but it is important to include it in education as a free skill for the 21st century. The main reason for this is that the existence of people with collaboration is much more important today. Because today, compared to previous periods, collaboration skill is a need to meet the complex requirements of today's industry. At the same time, collaboration skills are among the important skills that need to be taught today for the social studies course that prepares individuals for social life.

The main comment to be made about collaboration skill is that it should be within the scope of a group interaction. Because the basis of collaboration is mutual interaction and working towards a common goal. What is necessary for working towards a common goal is the creation of a common goal. This common goal provides the necessary motivation to encourage individuals to work with each other. One of the main factors that sustain a society is also related to having a common purpose. If a society lacks a common purpose, it is not possible to make a common unity and work. Especially in the 21st century, it is vital to be able to work together towards common goals at both social and individual level. The social studies course comes to the forefront in the process of gaining individuals in these conditions where collaboration skills are actively required.

Social Studies is based on ensuring that individuals living in society work for the public good by acquiring citizenship competences. In this process, in order to make individuals active in social life, they need to have a number of skills and competences. Among these skills, collaboration skills are also included in the skills for participation. Participation has an important place in social studies. Citizens' participation in both social life and political life is among the general aims of the social studies course. In this process, collaboration skills gain importance. For example, collaboration is the basis of skills such as social participation in the social studies course. In the social participation competences defined by the National Council for the Social Studies (NCSS), it is emphasised that students should work individually or with others to plan an appropriate action (NCSS, 1994 p.149). In accordance with this stated goal, it is necessary for individuals in social life to have collaboration skills in order to form unity and unite around a common goal. For this reason, collaboration skills are important within the scope of the social studies course and are also included in the Social Studies Curriculum (MEB, 2018). According to Bozkurt (2021), the undergraduate programme of social studies course is much more successful in gaining collaboration and communication skills compared to other skills. Another reason for this is also related to the aims of the social studies course. Building a

democratic society and equipping individuals with citizenship knowledge and skills are among the main objectives of the social studies course. In the process, collaboration skills should be actively used. For example, it is important that individuals, who are the basic indicators of a democratic society, actively participate in civil society and have a sense of responsibility. In this process, it is possible to create a democratic society through collaboration rather than individual efforts (Kahne & Westheimer, 2003, p. 63). Thanks to the acquisition of collaboration skills, individuals can take part more effectively in the construction of society in accordance with the goal of social studies.

Activity Sample

Activity Sample

Couse Name: Social Studies
Grade: 7
Learning Area: Global Connections
Recommended Duration: 40
Acquisition and Indicators: SB.7.7.4. Develops ideas for solving global problems with his/her friends / *Global climate change, natural disasters, hunger, terrorism and migration issues will be discussed.*
Materials, if any: -
Environment: Classroom

Preparing for the Activity
Duration: 10 Dakika

Before the activity, students are divided into groups of 3 or 5 according to the class size. Each group is given a team name related to the global problem they have chosen. Afterwards, they are asked to discuss among themselves for the solution of the global problem they have chosen. After the discussion, the application phase of the activity is started.

Implementation of the Activity
Duration: 20 Minute

In the implementation phase, each group is asked to write a one-page solution proposal for the mentioned problem based on the results of the discussion. The written suggestions are read by the selected group representative. Afterwards, the other groups are asked to bring criticism and solution suggestions for this proposal respectively. Based on these criticisms and suggestions, the solution proposal is finalised. Afterwards, the criticism and solution proposal for the global problems chosen by the other group is recommended. The final stage is passed for the evaluation of the solution proposals for global problems selected by all groups respectively.

Evaluation of the Activity
Duration: 10 Minute

At this stage of the activity, each group in turn evaluates the final version of their solution proposals. At this stage, the group members make an evaluation of the positive or negative contribution of the additions and corrections made by the other groups during the development of the solution proposal. After all groups have made their evaluations, the texts containing the solution proposals are posted on the class board.

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CHAPTER 7: MEDIA LITERACY: SAMPLE ACTIVITY FOR SOCIAL STUDIES

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Introduction

This chapter explores the definitions and significance and media literacy as distinct from traditional forms of literacy, its historical development in global context, the importance of media literacy skills as advocated by the P21 Partnership Program and the National Council for the Social Studies (NCSS). Additionally, this chapter provides an overview of introducing media literacy programs at middle school level Turkey. By delving into the place of media literacy in the social studies curriculum and discussing effective strategies for teaching media literacy, this chapter further examines the intersections between media literacy and social studies, aiming to highlight the role of media literacy in fostering critical thinking, enabling individuals to navigate the media landscape, and encouraging active participation as evidenced by social studies curricula in democratic societies. Finally, a sample media literacy lesson plan was provided at the end of the chapter.

Traditional Literacy vs. Media Literacy

Traditional literacy encompasses the foundational skills of reading, writing, and comprehension. It enables individuals to understand, interpret, and communicate through written text. Reading involves decoding and comprehending written information, while writing entails expressing ideas and thoughts through written language. Comprehension is the ability to understand and derive meaning from text (Dando, 2016). Media literacy, on the other hand, refers to "the ability to access, analyze, evaluate, and communicate message in a variety of forms" (Aufderheide,1993). Media literacy includes skills of access, analysis, assessment, creation, and action using all forms of communication (National Association for Media Literacy Education, 2022). It involves critical thinking (Feuerstein, 1999), visual literacy (Chauvin, 2003), understanding media techniques (McBrien, 1999), and being able to decipher the persuasive elements (Megee, 1997; Silverblatt, Miller, Smith & Brown, 2014) and biases in media messages (Vraga, Tully & Rojas, 2009). Media literacy enables individuals to navigate the media landscape effectively, comprehend complex messages, and become informed and active participants in a media-driven society (Von Gillern, Gleason & Hutchinson, 2022).

History of Media Literacy

The roots of media literacy education can be traced back to the mid-20th century when mass media began to play a prominent role in different societies. The "hypodermic needle" model, also known as the "magic bullet" model, was a prominent theory of media effects during the interwar period (1918-1939). This model suggested that media messages were like a “magic bullet” that could directly and immediately influence and control the attitudes, beliefs, and behaviors of individuals, like how a hypodermic needle injects a substance into the body. The hypodermic needle model was influenced by behaviorism, a psychological approach that emphasized the study of observable behaviors and stimulus-response relationships (Anderson, 2021; Thibault, 2016). According to this model, individuals were seen as passive recipients of media messages, and the media was believed to have a direct and powerful influence on shaping their thoughts and actions. During the interwar period, particularly in the context of the rise of totalitarian regimes and propaganda efforts, the hypodermic needle model was used to explain how leaders could seemingly “brainwash” citizens and manipulate public opinion through mass media. The theory suggested that media propaganda could effectively control and manipulate public consciousness, erasing individuality and critical thinking (O’Reilly, 2018). However, it is important to note that the hypodermic needle model has been criticized and largely discredited over time. Contemporary research and theories of media effects have moved away from a simplistic direct effects perspective and acknowledge the complexity of media influence.

The agenda-setting theory, first proposed by M. McCombs and D. L. Shaw in the 1960s in the context of presidential election in the US, suggests that media have the power to influence the importance placed on issues in the public's mind. Media, through their selection and emphasis on certain topics, can set the agenda for public discussion and shape what people consider significant or salient (Berger, 2001; McCombs, 2005). Media literacy is particularly relevant in the context of agenda-setting theory. By developing critical thinking media literacy, individuals can become more discerning consumers of media and critically assess the information they encounter. They can question the media's choice of topics, evaluate the credibility of sources, and consider alternative perspectives.

As media have become more prevalent and diversified today, educators and scholars recognize the need to equip individuals with the skills to navigate this influential landscape. Despite this shift, early efforts in media literacy education still focused on protectionism, aiming to shield individuals from potentially harmful effects of media. (Potter, 2022). However, over time, media literacy evolved into a more comprehensive approach centered on critical inquiry. This shift recognized the importance of enabling individuals to question, analyze, and interpret

media messages, allowing them to become active and discerning consumers and producers of media (Turin & Friesem, 2020). J. Potter's approach to media literacy education places an emphasis on changing young people's attitudes and behaviors (Potter, 2010; 2011). In contrast, R. Hobbs highlights a shift in the field away from persuasion towards helping students become independent learners. This shift illustrates a move from teacher-centered pedagogy to learner-centered pedagogy (Hobbs & Tuzel, 2017).

Hobbs argues that when media education is approached from the perspective of media effects, it tends to focus on persuading students to adopt certain viewpoints or behaviors desired by the teacher. This approach can be seen as a pedagogy of persuasion, where the goal is to change students' mindsets and behaviors (Hobbs & McGee, 2014). However, Hobbs advocates for a constructivist approach to media literacy education. In a constructivist approach, students are encouraged to be curious researchers and autonomous thinkers, rather than passive recipients of knowledge. They are provided with the tools and skills to critically analyze media messages and engage in their own inquiries. The shift towards a constructivist approach aligns with the learner-centered pedagogy, where students take an active role in their learning experience. They become curious investigators, seeking out information, questioning, and constructing their own understanding. This approach promotes critical thinking, independent thought, and self-directed learning (Hubbard, 2012).

By adopting a constructivist approach, media literacy education enables students to navigate the complex media landscape with agency and autonomy. They develop the skills to evaluate and analyze media messages independently, rather than relying solely on external authority. This shift in pedagogical approach reflects a broader shift in education towards student-centered learning, where learners are empowered to be active participants in their own education (Hobbs, 2011).

The concept of “digital native” and “digital immigrant” has had an impact on discussions surrounding media literacy and the role of individuals in navigating the digital landscape. The term “digital native” refers to individuals who have grown up in the digital age and are presumed to have a natural proficiency and familiarity with digital technologies and media. These individuals are often assumed to possess innate skills and knowledge in using digital tools and navigating online platforms. On the other hand, "digital immigrant" refers to individuals who were born before the widespread adoption of digital technologies and have had to adapt to the digital world later in life. They may be perceived as less comfortable or proficient with digital technologies and media compared to their younger counterparts (Prensky, 2001).

In the context of media literacy, the digital native-digital immigrant dichotomy raises questions about how individuals of different generations approach and engage with media. Digital natives are often seen as more adept at navigating the complexities of online information, social media, and digital communication. They are assumed to possess inherent media literacy skills, such as critically evaluating online sources and understanding digital citizenship (Kirschner & De Bruyckere, 2017).

On the contrary, digital immigrants may need additional support and education to develop media literacy skills in the digital landscape. They may need guidance on the identification of credible sources, understanding online privacy and security, and critical analysis of digital media messages. However, it is essential to approach the distinction between natives and digital immigrants with caution. Although younger people may have grown up with technology, they are not guaranteed to be able to critically evaluate and engage in the media. Media literacy is an acquired skill that requires education, practice and critical thinking, regardless of age or exposure to digital landscape. (Livingstone, Haddon, Görzig & Ólafsson, 2011; Romero, Guitert, Sangrà & Bullen, 2013).

Other key figures and organizations have also contributed to the development and advancement of media literacy. Marshall McLuhan, a renowned media theorist, explored the impact of media on society and popularized the phrase "the medium is the message". According to McLuhan, the medium through which information is transmitted shapes and influences the message itself. He argued that different media have different characteristics and affordances that shape how we perceive and interpret information. McLuhan believed that understanding the medium is crucial for understanding the broader social and cultural impacts of media technologies. McLuhan also introduced the notion of a “global village,” in which electronic media, such as television and the internet, create a sense of global connectivity and interdependence. He predicted that electronic media would dissolve traditional boundaries and create a more interconnected and unified world (McLuhan & Powers, 1989).

In terms of media literacy, McLuhan emphasized the importance of understanding and critically engaging with media. He believed that media literacy involved more than just understanding the content of media messages but also required an awareness of the medium itself and its effects on individuals and society. McLuhan argued that media literacy is essential for navigating the rapidly changing media landscape and avoiding the potential negative consequences of media consumption.

McLuhan's ideas have been foundational in shaping contemporary discussions and approaches to media literacy education. Media literacy programs often incorporate concepts such as media analysis, deconstruction of media messages, understanding media bias, and developing critical thinking skills to engage with media responsibly. (Euchner,2016; Kuskis, 2012).

The Center for Media Literacy (CML), founded by Elizabeth Thoman, has been instrumental in promoting media literacy education and developing frameworks and resources for educators (Thoman & Jolls, 2005). CML's approach to media literacy is based on a framework called the Five Key Questions of Media Literacy, which provides a structure for analyzing and evaluating media messages. The five key questions are as follows:

1) Who created this message?

Understanding the creator of a media message helps assess their credibility and potential biases. It involves considering the background, expertise, and reputation of the creator or source. By researching the author, organization, or entity responsible for the message, you can gain insights into their motivations, perspectives, and potential agenda.

2) What creative techniques are used to attract my attention?

Media messages employ various techniques to capture and hold the audience's attention. This can include attention-grabbing visuals, captivating storytelling, persuasive language, emotional appeals, humor, or other creative elements. Analyzing these techniques helps understand how the message is designed to engage and influence viewers.

3) How might different people understand this message differently than me?

Different individuals bring their unique backgrounds, experiences, beliefs, and values to the interpretation of a media message. Factors such as cultural context, education, socioeconomic status, and personal biases can shape varying perspectives. Recognizing this diversity helps us understand that people may interpret the message differently based on their own subjective filters.

4) What values, lifestyles and points of view are represented in, or omitted from, this message?

Media messages often reflect certain values, lifestyles, and perspectives while excluding others. Analyzing the content, language, imagery, and representation within the message can reveal the underlying values, social norms, or ideologies being conveyed. It is important to

assess whether the message provides a balanced representation or if certain voices or groups are marginalized or omitted.

5) Why is this message being sent?

Understanding the purpose of a media message involves considering its intended outcomes and the potential interests of the sender. Messages can be disseminated for various reasons, such as to inform, persuade, entertain, raise awareness, sell a product, shape public opinion, or promote a particular agenda. Examining the context and considering who benefits from the message can help uncover underlying motivations. (www.medialit.org)

The Media Education Foundation (MEF) is a nonprofit organization based in the United States that produces and distributes educational documentaries and resources aimed at promoting media literacy, critical thinking, and social awareness. The organization was founded in 1992 and has since become a leading provider of media education materials for educational institutions, community organizations, and individuals. MEF continues to produce and distribute educational media resources that contribute to media literacy education and promote critical thinking about media's impact on individuals and society. Through their work, they seek to encourage informed and active media engagement that promotes social awareness and responsible media consumption. MEF has produced thought-provoking documentaries and educational materials that foster media literacy skills and critical engagement (Stein & Prewett, 2009).

Importance of Media Literacy Skills as Set Forth by P21 Partnership Program and NCSS

The National Council for the Social Studies (NCSS) and the Partnership for 21st Century Skills, a prominent advocacy organization focused on infusing 21st-century skills into education, have collaborated to empower social studies teachers. Through their collaboration, they have developed engaging resources and innovative ideas to help teachers integrate the 21st-century focus into their classrooms (Farisi, 2016; Fitchett, 2010; Mutiani & Faisal, 2019). The P21 Partnership Program, an umbrella organization of educators, businesses, and policymakers, recognizes media literacy as one of the essential 21st-century skills necessary for success in the global world (https://www.battelleforkids.org/networks/p21). Media literacy, along with information and technology literacies, is seen as integral to fostering *creativity, critical thinking, communication, and collaboration skills* (4Cs) in an increasingly media-saturated world (Kivunja, 2015). The program highlights the need for individuals to be able to analyze and evaluate media messages, navigate digital spaces responsibly, and harness the power of media for effective communication and expression (P21, 2015) The P21 Partnership

Program is an initiative that focuses on promoting 21st-century learning skills, including media literacy, among students. One of the strengths of the P21 Partnership Program is its recognition of the importance of media literacy in the digital age. With the increasing prevalence of media consumption and the rapid dissemination of information through various platforms, it is crucial for students to develop the skills necessary to navigate and evaluate media content effectively. By incorporating media literacy into their framework, the program acknowledges the need to equip students with the ability to discern reliable sources, detect bias, and understand the persuasive techniques employed by media creators.

Another aspect of the P21 Partnership Program is its emphasis on critical thinking and problem-solving skills. Media literacy is not just about recognizing media messages but also about engaging with them thoughtfully. The Program aims to cultivate students' ability to analyze, interpret, and evaluate media content, empowering them to question, challenge, and form their own opinions. These skills are essential in a world where misinformation and fake news can easily spread, and individuals need to be able to assess the credibility and validity of the information they encounter.

In line with P21, the National Council for the Social Studies (NCSS) also promotes media literacy integration into the social studies curriculum. The NCSS emphasizes the importance of media literacy in developing informed, active citizens capable of critically engaging with media messages, analyzing historical events, understanding diverse cultures, and participating in civic life. By incorporating media literacy into social studies education, students can gain a deeper understanding of the complex relationship between media, society, and democratic processes (NCSS, 2009). One strength of the NCSS's inclusion of media literacy in social studies education is its acknowledgment of the central role of media in shaping society and influencing individuals. Media is a powerful tool for disseminating information, shaping public opinion, and promoting social and cultural values. By integrating media literacy into social studies, the NCSS recognizes the need to equip students with the skills to critically analyze media messages, evaluate sources, and navigate the complexities of the media landscape.

Another positive aspect of the NCSS's approach is its emphasis on fostering informed and responsible citizenship. Media literacy education provides students with the tools to understand the media's role in a democratic society, enabling them to engage actively in civic life. By developing skills such as media analysis, students can better recognize bias, distinguish between fact and opinion, and make informed decisions as participants in the democratic process. This focus on civic engagement aligns with the broader goals of social studies education.

In the context of NCSS Position Statement, media literacy education and civic education are now inseparable, implying that in today's digital age, understanding and engaging with media is essential for active participation in a democratic society. This claim suggests that media literacy skills and the ability to critically navigate and create media content are crucial for individuals to become informed citizens and actively contribute to shaping democracy. In this context, civic education and media literacy are viewed as indispensable forms of participation in democratic societies. “Civic media literacy” refers to the ability of individuals to critically analyze, evaluate, and engage with media in the context of civic and democratic participation. In today's digital age, where media is pervasive and easily accessible, civic media literacy plays a crucial role in empowering citizens to be informed and active participants in their communities. Civic media literacy involves understanding how media platforms and messages shape public discourse, influence opinions, and impact society. Media, including digital media platforms, have a significant impact on public opinion, political discourse, and the formation of social and cultural norms. Understanding how media operates and influences society is essential for middle school students to engage meaningfully in democratic processes (Mason & Metzger, 2012).

The proliferation of digital technologies and social media platforms has transformed the media landscape. Digital interactions have become integral to contemporary civic engagement, allowing individuals to access and share information, express opinions, and participate in public discussions. Media literacy education, in this context, could help students navigate this evolving landscape and engage responsibly and effectively in digital spaces (Mihailidis, 2011).

Teaching Media Literacy in Social Studies

Social studies takes its content from various social science disciplines. In the study of geography topics media literacy skills can enable students to analyze maps, infographics, and digital media to understand spatial relationships, interpret data, and recognize how media representations can influence perceptions of regions and cultures (Roberson, 2018). They can also explore how media portrayals of different geographic areas contribute to stereotypes or misrepresentations and engage in discussions about cultural diversity and representation (Childs, 2014).

Within the context of economics, media literacy helps students critically evaluate advertisements, commercials, and online shopping platforms. They can examine how media messages target specific audiences, manipulate consumer behavior, and shape economic

decision-making. Media literacy empowers students to become savvy consumers who can navigate the digital marketplace and make informed choices (Yates, 2011).

In terms of civic participation, media literacy is crucial for understanding political campaigns, analyzing news coverage, and recognizing the role of media in shaping public opinion (Hobbs, 2004). Students can develop the skills to identify media bias, evaluate the credibility of sources, and engage in constructive dialogues about current events. They can also learn about the ethical responsibilities of media producers and consumers, such as the importance of responsible sharing, fact-checking, and media literacy advocacy (Bennett, 2007; Martens & Hobbs, 2015).

The concept of "digital natives", which posits that young people inherently possess superior technological skills, is now being questioned. While today's youth may have grown up surrounded by technology, it does not guarantee their competence in using it for academic pursuits. Educators should acknowledge that students may require explicit instruction on how to use technology as a tool for learning, including information literacy, digital research skills, and effective communication in online spaces (Sorrentino, 2018).

In the field of social studies education, there are several ways to incorporate technology thoughtfully. Technology can provide access to a wealth of primary and secondary sources, historical documents, and multimedia content that can enrich students' understanding of social studies topics. Virtual simulations and interactive platforms can help students explore historical events, simulate decision-making processes, and analyze complex social issues. Collaborative online tools and social media platforms can facilitate communication, global connections, and meaningful dialogue among students (Waring, 2008).

To effectively teach media literacy in the social studies classroom, educators can employ various strategies. These include:

Media analysis activities: Engaging students in critical analysis of media messages by examining advertisements, news articles, political cartoons, and social media posts. Students can identify persuasive techniques, detect bias or fake news and evaluate the credibility and reliability of sources (Damico & Panos, 2018; Manfra & Holmes, 2018) .

Media production projects: Encouraging students to create their own media content, such as videos, podcasts, and infographics. This hands-on approach allows them to apply media literacy skills, practice responsible media creation, and gain a deeper understanding of media techniques and messages (Stein & Prewett, 2009).

Collaboration and discussion: Facilitating meaningful discussions and collaborative activities that encourage students to share diverse perspectives, challenge assumptions, and

engage in respectful debates about media representations and their impact on society (Gainer, 2010; Mihailidis & Thevenin, 2013).

Integration of technology: Incorporating digital tools and resources that support media literacy education, such as online fact-checking platforms, interactive media analysis tools, and digital storytelling platforms. This integration allows students to develop digital literacy skills along with media literacy skills (Moore, 2013; Zhang, Zhang & Wang, 2020).

Ethical issues: Addressing ethical issues related to media consumption and production, such as privacy concerns, digital citizenship, and responsible online behavior. Educators can guide students in understanding the consequences of their digital actions and promote responsible and ethical media practices (Hepburn,1999; Huda & Hashim, 2022).

Issues in Media Literacy Education

Media literacy is a crucial component of social studies education, as it helps students understand and analyze the role of media in shaping societal beliefs, values, and behaviors. However, there are several issues and challenges associated with media literacy in the context of social studies. Below is the list of some issues:

Lack of emphasis: Media literacy may not receive sufficient attention or emphasis in social studies curricula. The focus on traditional subject matter and standardized testing often leaves little room for exploring media analysis skills and critical thinking about media (Schilder, Lockee & Saxon, 2016).

Rapidly evolving media landscape: The rapid evolution of media platforms and technologies poses challenges for educators in keeping up with the latest trends and teaching relevant media literacy skills. New forms of media and communication constantly emerge, requiring ongoing adaptation in teaching strategies (Maksl, Ashley & Craft, 2015).

Digital divide: Socioeconomic disparities can impact media literacy education. Students from disadvantaged backgrounds may lack access to digital devices, high-speed internet, or resources needed to engage with media effectively, limiting their exposure to diverse media sources and critical analysis opportunities (Van Deursen, 2017).

Misinformation and disinformation: The prevalence of misinformation and disinformation on social media platforms is a significant challenge. Teaching students to navigate and critically evaluate online information becomes increasingly important as false or misleading content can influence public opinion and undermine democratic processes (Maloy, Butler, Goodman, 2022).

Confirmation bias and filter bubbles: Social media algorithms and personalized news feeds contribute to the formation of filter bubbles, where individuals are exposed primarily to

information that aligns with their existing beliefs and perspectives. This can reinforce confirmation bias and limit exposure to diverse viewpoints, hindering the development of critical thinking skills (Miller, 2016).

Ethics and responsibility: Teaching media literacy in social studies should also address ethical considerations related to media use. This includes discussions on privacy, digital rights, cyberbullying, online harassment, and responsible digital citizenship (Gibbons, 2012).

Teacher training and resources: Educators may face challenges in receiving proper training and access to resources for teaching media literacy effectively. Professional development opportunities and up-to-date instructional materials specifically designed for media literacy in social studies may be lacking (Ranieri, Bruni & Orban de Xivry, 2017).

Addressing these issues requires collaboration among educators, policymakers, media organizations, and communities. It is essential to integrate media literacy education into social studies curricula, provide ongoing professional development for teachers, promote critical thinking skills, and foster partnerships with media organizations to provide authentic learning experiences. Additionally, promoting media literacy beyond the classroom by engaging families and communities can help create a more informed and media-savvy society.

History of Media Literacy in Social Studies Programs in Turkey

Until the 2000s in Turkey, certain middle school courses incorporated units that covered television, newspapers, telephones, and similar media. These units were integrated into courses like life sciences, citizenship, and social sciences. However, media literacy was not explicitly considered during the teaching of these topics. The concept of media literacy gained attention in Turkey for the first time in 2003 with the Communication Council. This event led to the recognition of the existence and significance of media literacy, as highlighted in the Council's final declaration. In 2004, the Turkish Radio and Television Council (RTUK) proposed the introdution of media literacy courses at the primary school level, thereby marking a first significant step. Subsequently, initiatives were undertaken, including television broadcasts promoting media literacy, the establishment of smart sign systems for television programs, the creation of national websites (http://www.medyaokuryazarligi.org.tr/), and the organization of international meetings. These efforts, occurring in the mid-2000s, rapidly propelled media literacy to become a prominent issue on the national agenda.

Through collaborative efforts between the Ministry of Education (MEB) and the RTUK, a new program was developed, pilot studies were conducted, and starting from the 2006-2007 academic year, two-hour a week media literacy course became available as an optional course

in secondary schools (MEB, 2006). The introduction of this optional class generated increased interest from NGOs, educators, and academics in the field. Workshops and congresses were organized to identify areas of improvement, and numerous research reports, articles, and books were published. In 2012, two significant studies played a pivotal role in guiding media literacy education in Turkey. The first was the Media Literacy Workshop, which brought together Ministry representatives, media producers, educators, academics, and NGO representatives. The second was the Media Literacy Research in Turkey Scale, conducted under the auspices of the RTUK by researchers. Both activities converged on the conclusion that the existing media literacy courses were inadequate and required a change in approach and programs. The outcomes of these efforts garnered widespread acclaim in the media and public opinion, while also capturing the attention of educational administrators throughout Turkey.

Integrating media literacy into the social studies curriculum enriches students' understanding of historical events, cultural diversity, geographic phenomena, economic systems, and civic participation (Kubey, 2004). By incorporating media literacy skills, students are equipped to critically evaluate media sources, identify bias, recognize propaganda techniques, and distinguish between fact and opinion (Ross, 2014). For example, when studying historical events, students can analyze primary and secondary sources, including photographs, news articles, and documentaries, to gain different perspectives and critically evaluate the reliability and bias of these sources. They can examine how media representations of historical events shape public perception and influence collective memory.

In 2013, significant progress was made in media literacy education in Turkey. The media literacy teaching program (MEB, 2013) and the corresponding course book underwent renewal and updates. Both distance and face-to-face teacher training activities were implemented to support the effective delivery of media literacy education. As part of the ongoing curriculum reform since 2011, language arts classes in primary and secondary schools were aligned with media literacy. This integration ensured that media literacy classes became an independent and optional subject, associated with other subjects, for the 13 and 14-year-old student group as of 2015. This development solidified the position of media literacy in the educational system, recognizing its importance as an integral component of the curriculum (.

Media literacy skills, which fall under the larger umbrella of information, media, and technology literacy skills, are an integral component of the social studies program (P21, 20015). According to Partnership for 21st Century Skills, information, media, and technology skills, which encompass information literacy, media literacy, and ICT (Information and

Communication Technology) literacy, are essential competencies for students in the 21st century (Yell & Box, 2008) These skills enable individuals to effectively find, evaluate, analyze, and use information, media, and technology in various contexts. In alignment with the P21 Partnership Program, media literacy skills are specifically incorporated into under the same name in social studies curriculum in Turkey. These skills have a direct connection to learning standards in the *Science, Technology, and Society* unit for 5th-grade students. Additionally, in the 7th grade, media literacy skills are linked to learning standards in the *Individual and Society* unit (Erol, 2021).

Media literacy is recognized as an essential skill in Social Studies Program in Turkey. The program acknowledges media literacy as a component of digital citizenship. Within the subject of digital citizenship, specific learning standards are outlined for the fifth, sixth, and seventh grade students. In the fifth grade, students are expected to question the accuracy and reliability of information obtained from virtual media platforms. In the sixth grade, students are encouraged to analyze how the media influences administrative decision-making and the national culture by incorporating elements from various cultures. In the seventh grade, students are expected to discuss the role of media in social change and interaction, as well as exercise their rights and responsibilities while utilizing communication tools (MEB, 2018; Sensekerci, 2022).

Conclusion

In conclusion, media literacy is a critical component of social studies education. In today's digital age, where information is readily accessible and influential, students must develop the skills to critically analyze and evaluate media messages. Media literacy empowers them to navigate the complex landscape of media, discern credible sources from misinformation, and understand the underlying biases and perspectives shaping the information they consume. By integrating media literacy into social studies curricula, educators can foster informed and engaged citizens who are equipped to participate actively in their communities, make informed decisions, and contribute to a democratic society. As the media landscape continues to evolve, it is essential that media literacy remains a fundamental pillar of social studies education, equipping students with the tools they need to be discerning consumers and creators of media content.

Sample Activity for Media Literacy

Duration: 40+40+40 minutes

Grade Level: 7th grade

Objective: Developing an understanding of the influence and impact of media on society.

Developing skills to critically analyze media messages.

Essential Question: How does media influence our thoughts, attitudes, and behaviors?

Class 1 Activities:

Warm-up (5 minutes):

- ❖ Ask students to write down their favorite form of media (e.g., TV show, movie, website, social media platform) and briefly explain why they like it.

Discussion (15 minutes):

- ❖ Facilitate a whole-class discussion based on the warm-up activity.
  - Ask students to share their responses and discuss the reasons behind their choices.
- ❖ Encourage critical thinking by asking questions like:
  - How does this media influence your thoughts, feelings, or behaviors?
  - Do you think media can affect how people see the world?
  - Have you ever noticed any biased or misleading information in the media?

Introduction to Media Literacy (20 minutes):

- ❖ Present a brief overview of media literacy, defining it as the ability to analyze, evaluate, and understand media messages.
- ❖ Discuss the importance of being media literate in today's society.
- ❖ Share examples of how media can shape public opinion, influence consumer behavior, or perpetuate stereotypes.

Class 2 Activities:

Recap (5 minutes):

- Briefly review the concepts covered in the previous class.
- Remind students of the essential question.

Guided Analysis (15 minutes):

- Show students a short video clip, TV commercial, or print advertisement with a clear message.
- Model the process of analyzing the media message by breaking it down into its elements, such as visuals, audio, language, and underlying messages.
- Discuss persuasive techniques used, such as emotional appeal, celebrity endorsement, or repetition.

Group Activity (20 minutes):

- Divide students into small groups.
- Provide each group with a different media message (video, image, article) related to a current issue or topic.
- Instruct students to analyze the media message using the same approach discussed earlier.
- Encourage discussion within the groups and prompt them with guiding questions like:
    - What is the main message of this media piece?
    - What persuasive techniques or strategies are being used?
    - Are there any biases or stereotypes present?
    - How might this message influence people's opinions or actions?

Class 3 Activities:

Group Presentations (30 minutes):

- Ask each group to present their analysis to the class, highlighting key findings and insights.

Reflection (10 minutes):

- Ask students to reflect on what they have learned throughout the media literacy lessons.
- Discuss the importance of being responsible consumers of media and how they can apply these skills in their everyday lives.

Assessment Criteria:

- Observe students' participation in class discussions and group activities.
- Review students' group presentations and their ability to identify persuasive techniques, biases, and credibility issues in media messages.

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CHAPTER 8: INFORMATION, COMMUNICATIONS, AND TECHNOLOGY (ICT) LITERACY: A SAMPLE ACTIVITY FOR SOCIAL STUDIES

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Introduction

Information, Communication and Technology (ICT) literacy refers to the ability of individuals to access, understand, evaluate and share information effectively in today's digital age and to use technology effectively (Demirel, 2009). ICT literacy is important for individuals to be successful in modern societies and to take part in society in a participatory way (Gelen, 2017). ICT literacy is critical for individuals to be successful in business, education, communication and many other areas (Uçak & Erdem, 2020). These skills help individuals adapt to the requirements of the digital age and take part effectively in the information society (Doğan & Demirkan, 2020).

Information, Communication and Technology (ICT) literacy refers to the ability of individuals to use information and communication technologies effectively (Demir & Özyurt, 2021). This includes the ability to navigate effectively in the digital world, understand information, communicate, problem solve and think creatively (Işık, Özdemir & Kuşlu, 2021). ICT literacy is important for individuals to be successful in daily life, business and society in today's rapidly changing digital environment (Kayhan, Altun, & Gürol, 2019). ICT literacy helps individuals to use digital tools safely and effectively in daily life, while also enabling them to gain competitive advantage in business and society (Altun & Alpan, 2021). These skills appeal to students, business professionals and all segments of society in general. Schools, workplaces and other educational institutions play an important role in preparing individuals for the digital age by focusing on the development of these skills (Avcı & Candan, 2023). In this section, we will try to explain the concepts of information, communication and technology literacy.

Information Literacy

In the information age, information literacy is becoming increasingly important. Information does not only mean understanding texts; it also includes effectively navigating the digital world, evaluating various types of media, and critically analyzing information (Jones-Jang, Mortensen, & Liu, 2021). In this section, we will explore the key elements of information literacy and offer

practical tips for developing skills to access, evaluate and share information in the digital world. Information literacy refers not only to the ability to read information, but also to the ability to evaluate, understand and use information effectively (Ahmad, Widén, & Huvila, 2020).

What is Information Literacy?

Information literacy is the ability to interact with information. If literacy in the traditional sense includes only the ability to recognize letters and understand words, information literacy encompasses the ability to understand the thoughts of others, evaluate information, and use information critically in today's complex information environment (Fraillon, Ainley, Schulz, Friedman, & Duckworth, 2020). Information literacy refers to how a learner approaches, understands, and uses information (Fraillon, Ainley, Schulz, Duckworth, & Friedman, 2019). Information literacy is the ability of individuals to access, understand, evaluate, use, and communicate information through various media and information sources (Alwreikat, 2022). While traditionally, literacy is only about text, information literacy also focuses on digital media, internet resources, social media and other means of information transmission (Falloon, 2020). This skill set allows individuals to act effectively in complex information environments (Mudra, 2020).

The Basic Elements of Information Literacy

Critical Thinking: Information literacy includes critical thinking skills. The ability to question information, identify contradictions and draw logical conclusions helps an individual to approach information more effectively. Critical thinking involves trying to understand information in depth, rather than simply accepting it (Gnambs, 2021).

Access to Information: In the digital age, access to information is now at our fingertips. However, it is important to assess the reliability and accuracy of this information. Finding the right sources, recognizing trustworthy sites and being aware of data security issues are basic elements in the process of accessing information (Rubin & Rubin, 2020).

Media Literacy: In addition to traditional texts, the ability to understand and evaluate media types such as photographs, videos and audio recordings is part of information literacy. With the widespread use of tools such as Photoshop, the ability to detect media manipulation has become increasingly important (Özel, 2022).

Social Media and Information Sharing: Although social media has increased the speed of information sharing, it is necessary to be careful on these platforms. Drawing the line between

factual and misleading information is a critical skill to strengthen the information literacy of social media users (Buckingham, 2020).

The Importance of Information Literacy

Information literacy is an important skill that enables individuals to effectively navigate, access, evaluate and use information in today's complex information environment. Information literacy has become an increasingly important skill (Rubin, & Rubin, 2020). As access to information becomes easier, the ability to understand, evaluate and effectively use this information has become a vital skill that enables individuals to be successfully guided (Akman & Koçoglu, 2017; Bayram, & Karaaslan, 2022). In this section, we will focus on the definition of information literacy, its importance and strategies for its development (Kurum, 2022). Here are some points that emphasize the importance of information literacy (Scherer ,& Siddiq, 2019):

Access to Accurate Information: Information literacy enables individuals to access reliable and accurate information. This makes it possible to make informed and knowledge-based decisions in an environment full of false or misleading information (Siddiq, & Scherer, 2019).

Critical Thinking Skills: Information literacy enables individuals to evaluate information from a critical perspective. It develops the skills of logical thinking, questioning the reliability of information and looking from various perspectives (Semerci, 2003).

Problem Solving Ability: Information literacy helps individuals to use information effectively to solve the problems they face. It improves their ability to identify problems, gather information and use this information in a solution-oriented manner (Gelen, 2017).

Effective Communication: Information literacy allows individuals to express their thoughts clearly and effectively. This strengthens verbal and written communication skills (Korkut, 2005).

Technological Competence: Today, information is often available on digital platforms. Information literacy enables individuals to be competent in using technological tools, navigating the Internet effectively, and evaluating digital resources (Mardiyya, Anwar, & Chandra, 2020).

Openness to Learning: Information literacy encourages individuals to be open to learning and to continuously access information. This enables lifelong learning (Rubin & Rubin, 2020).

Social Participation: Information literacy encourages individuals to participate in democratic processes. Informed and informed citizens can participate more effectively in their societies (Kozaner Yenigül & Ustaoğlu Çelik, 2022).

Success in Business: Information literacy supports individuals to succeed in the world of work. In rapidly changing business environments, the ability to access and use information effectively contributes to career development.

Information literacy is a critical skill that equips individuals to succeed in the information society. This skill helps individuals to cope with the challenges they face in the information age and to move forward on the path of continuous learning and development (Mainake & McCrocklin, 2021).

What can be done to improve information literacy?

Gathering information from a variety of sources, rather than relying on a single source, can increase the ability to understand and evaluate different perspectives. It is important to access a variety of sources such as books, articles, expert opinions and reliable websites (Doğan & Demirkan, 2020). Instead of passively consuming information, it is important to read or listen to it from a critical perspective. Questioning and evaluating each piece of information can strengthen information literacy (Gelen, 2017).

A. Critical Thinking Exercises: Exercises on evaluating and criticizing reading materials encourage learners to develop critical thinking skills (Özdemir, 2005). Critical thinking is a thinking skill that focuses on the ability to analyze and evaluate information and reach logical conclusions (Rubin & Rubin, 2020). You can do various exercises to develop critical thinking skills. Here are some exercises to help you improve your critical thinking skills (Palavan, Gemalmaz & Kurtoğlu, 2015):

1. Article Analysis:

- Select an article or post.

- Identify the main idea.

- Evaluate the author's arguments and evidence.

- Come to a logical conclusion and relate your own thoughts to the content of the article (Demir & Özyurt, 2021).

2. Defend the Opposing View:

- Choose a topic and formulate your own opinion.

- Then, adopt an opposing view and defend it.

- This can improve your ability to see things from different perspectives and understand opposing arguments (Siddiq, & Scherer, 2019).

3. Information Gathering and Evaluation:

- Use different sources (books, articles, internet) to gather information on a specific topic.

- Critically evaluate the information, question the reliability of the sources and identify contradictions (Kurum, 2022).

4. Problem Solving Scenarios:

- Consider real-life scenarios.

- Identify problems, consider possible solutions and criticize these solutions.

- Discuss the advantages and disadvantages of each solution (Kurum, 2022).

5. Logical Argument Analysis:

- Break an argument into parts.

- Evaluate each part logically.

- Question the coherence and validity of the argument (Mainake & McCrocklin, 2021).

6. Defend your views:

- Identify and defend your own views.

- Strengthen your arguments to build resilience to criticism from others.

7. Group Discussions:

- Participate in group discussions on a specific topic.

- Listen to different views and express your own views clearly.

- Develop your ability to understand and respect the views of others (Akkaya Yılmaz & Çetin, 2022).

It is important to practice these exercises regularly to improve your critical thinking skills. In addition, gaining knowledge on various topics and understanding different perspectives can also enrich your critical thinking skills (Palavan, Gemalmaz & Kurtoğlu, 2015).

B. Source Evaluation Skills: Providing learners with a set of criteria they can use to evaluate information sources increases their access to reliable information. Source evaluation skills include the ability to access, understand and use information. The ability to access accurate and reliable information, to critique a variety of sources and to make informed decisions is important in this process. Here are some tips to help you improve your source evaluation skills (Argon, Öztürk & Kılıçaslan, 2008):

1. Assessing the Credibility of the Source:

-Author: What is the author's area of expertise? Does he/she have a relevant background?

- Publisher: Which publishing house published the article, book or report? Is the publisher reliable?

- Source Date: Is the information up to date? For some topics, old information may be outdated (Mainake & McCrocklin, 2021).

2. Understanding the Context:

- Before understanding the content of the article or book, consider its context. The preface, introduction and summary sections can give you a general idea about the topic.

3. Checking References:

- Does the source refer to other credible sources? This can help you check whether the information is supported or not.

4. Use a Variety of Sources:

- Instead of getting information from a single source, try to get information from a variety of sources with different perspectives on the topic. This can help you get a more comprehensive understanding of the topic.

5. Avoid Bias:

Be aware of the bias of sources or authors. If they advocate a particular view or ideology, evaluate this information critically.

6. Analyze the Structure of the Article or Book:

Evaluate the way the source is organized by examining structural elements such as headings, subheadings, graphs, tables, etc. This can help you better understand the information.

7. Review Community and Academic Reviews:

Academic articles or books are often reviewed by other experts. Therefore, you can assess the credibility of the source by checking its community or academic reviews.

8. Do Cross-Checks:

Compare different sources to verify information. If different sources confirm the same information, you can trust that information more.

Source evaluation skills are also closely linked to critical thinking processes. Approaching information from a critical perspective is an important step towards accurate and reliable information.

C. Digital Literacy Education: Training on information search, sharing and security in digital environments increases individuals' digital literacy skills (Karabacak & Sezgin, 2019). Digital literacy includes the skills of accessing information, evaluating this information, communicating effectively and using digital tools safely in the modern world (Demir, Öteles & Koçoglu, 2023). Digital literacy education is designed to help individuals act effectively and confidently in the digital world. Here are some strategies to improve digital literacy education (Bozkurt, Hamutoğlu, Kaban, Taşçı, & Aykul, 2021):

1. Teaching Basic Digital Skills: The focus should be on basic digital skills such as basic computer skills, using internet browsers, file management and using basic software applications (Altun & Alpan, 2021).

2. Safe Internet Use: Provide training on safe internet use. This can include topics such as using strong passwords, recognizing safe websites, and awareness of phishing attacks (Bozkurt, Hamutoğlu, Kaban, Taşçı, & Aykul, 2021).

3. Information Evaluation Skills: Teach students to evaluate information obtained from the Internet. Focus on recognizing and verifying authentic and reliable sources and detecting misleading information (Pala & Başıbüyük, 2020).

4. Digital Ethics and Responsibility: Emphasize ethical behavior and digital responsibility on the Internet. Address issues such as plagiarism, online harassment, copyright (Aksoy, Karabay, & Aksoy, 2021).

5. Data Privacy and Security: Teach students how to protect their personal information. Emphasize topics such as downloading software from reliable sources and using security software (Altun & Alpan, 2021).

6. Online Communication Skills: Teach email etiquette, digital meeting skills, how to communicate online, and how to participate effectively in a digital community.

7. Digital Research Methods: Develop skills to effectively conduct research on the Internet. Teach strategies for using the right keywords, evaluating various sources, and gathering information (Bozkurt, Hamutoğlu, Kaban, Taşçı, & Aykul, 2021).

8. Media Literacy: Develop skills in interacting with visual and print media. Focus on evaluating news sources, recognizing media manipulation and critically evaluating media content.

9. Digital Games and Simulations: Use digital games and simulations to make learning fun and interactive. Such tools can offer students the opportunity to practice and gain experience (Altun & Alpan, 2021).

Digital literacy education aims to empower individuals to navigate the digital world safely, consciously and effectively. These skills can help individuals succeed in their daily lives, education, and business (Bozkurt, Hamutoğlu, Kaban, Taşçı, & Aykul, 2021).

D. Training Programs and Workshops: To support information literacy, schools, institutions and communities can provide individuals with practical skills through organized programs and workshops. Training programs and workshops are learning experiences designed to provide individuals with specific skills, transfer knowledge and help participants develop in-depth understanding of specific topics. Training programs and workshops can cover a wide range of topics. Here are some suggestions for different types of training programs and workshops (Sağır, Demirdelen, & Alpagut, 2017):

1. Digital Literacy Workshops: Organize workshops on topics such as internet use, information assessment, safe online behaviors. Provide participants with practical skills such as avoiding phishing attacks and using strong passwords (Durukan, 2015).

2. Critical Thinking Training Programs: Design training programs to develop critical thinking skills such as logical thinking, argument analysis, and criticizing information. Organize workshops focusing on group discussions and problem solving through different scenarios (Şimşek, 2015).

3. Communication Skills Workshops: Organize workshops to develop effective communication, empathy, verbal and written communication skills. Focus on hands-on activities including role-playing, interactive group work and feedback exercises (Mainake & McCrocklin, 2021).

4. Creative Writing Workshops: Provide opportunities for participants to develop their creative writing skills. Organize workshops in different areas such as poetry, story writing, blogging, etc.

5. Foreign Language Education Programs: Organize programs that focus on language learning. Include activities to develop basic language skills (speaking, listening, writing, reading) and to increase cultural understanding.

6. Technology and Programming Workshops: Organize workshops on topics such as basic programming skills, web development, data analysis (Tünkler, 2022). Emphasize hands-on projects and practical applications to help participants develop their skills.

7. Leadership Development Programs: Design programs to strengthen leadership skills. Organize workshops to increase leadership potential by focusing on people management, problem solving, team motivation, etc.

8. Health and Wellness Programs: Organize workshops on physical and mental health. Create training programs on yoga, meditation, nutrition and help participants develop healthy living skills. Training programs and workshops should be designed to be interactive, participant-oriented and encourage hands-on learning. It is also important to provide an environment where participants can receive feedback and interact with each other.

Communication Literacy

Communication literacy refers to the ability of individuals to communicate effectively in today's rapidly changing and evolving communication environment. This concept encompasses

not only vocabulary and grammar skills, but also a wide range of skills such as digital media, visual communication and cultural understanding (Gnambs, 2021). Communication literacy aims to adapt to the needs of modern society by focusing on important skills such as access to information, critical thinking, effective communication and understanding cultural diversity. Today, communication plays a key role in the rapidly evolving world of the digital age (Tugtekin, & Koc, 2020). Communication literacy includes the skills and understandings necessary for individuals to communicate effectively in the information society. This concept encompasses not only oral and written communication, but also a number of different domains such as digital media, social media, visual media, and intercultural communication (Gómez-Trigueros, Ruiz-Bañuls & Ortega-Sánchez, 2019).

Basic Elements of Communication Literacy

1. Oral Communication: Verbal communication includes speaking and listening skills. Being a good speaker, expressing your thoughts clearly and listening effectively are essential elements for successful communication.

2. Language and Written Communication: Communication literacy starts with developing language skills. Communicating accurately and effectively in writing, conveying messages in a comprehensible way, and strengthening writing skills form the basis of these elements. Written communication skills include the ability to create written materials in various formats such as e-mail, report writing, blogging. Correct grammar, spelling and clarity of meaning are important for the effectiveness of written communication.

3. Visual Communication: Visual literacy has become an important skill today. The ability to understand and interpret visual elements such as photographs, graphics and videos is essential to be effective in modern communication. Visual media includes the ability to understand and use visual elements such as infographics, graphics and videos. This includes visualizing information effectively and enabling others to understand visual media.

4. Digital media literacy: With the increasing use of digital media, digital literacy of individuals has also gained importance. Searching for information online, using digital tools effectively and having knowledge about digital security are indispensable in today's communication world. In the digital age, skills to effectively navigate and produce content on social media, websites and other digital platforms are important. Mastering media credibility, digital security and online ethics is also part of this domain (Hidayat, & Ginting, 2020).

5. Critical Thinking: Communication literacy includes the ability to question information, evaluate information from a variety of sources, and develop a critical perspective. Individuals can access real and reliable information by using this skill under information overload.

6. Intercultural Communication: In a globalizing world, the ability to interact with different cultures is important. Intercultural communication literacy involves the ability to understand, appreciate and respond appropriately to cultural differences.

The Importance of Communication Literacy

Communication literacy is a fundamental requirement for individuals to succeed in their daily lives and professional careers. Having advanced communication skills includes the ability to effectively share information, understand it correctly and interact with a variety of communication tools (Çatak, 2022). Communication literacy can also improve a person's other important skills such as emotional intelligence, empathy and intercultural understanding (Anisimova, 2020). Communication literacy refers to the ability of individuals to communicate effectively. This skill includes being effective in both oral and written communication, understanding and interpreting correctly. The importance of communication literacy can be evaluated in many ways:

1. Effective Communication: Communication literacy enables individuals to express their thoughts, feelings and information clearly and effectively. This leads to successful communication in both professional and personal relationships (Koçoğlu, 2019).

2. Success in Business: In the world of work, effective communication skills are critical for career success. Communication literacy makes it easier to accurately understand tasks, follow instructions, and collaborate in the workplace.

3. Empathy and Relationship Development: Communication literacy involves understanding and empathizing with the feelings of others. This increases the ability to build healthy and positive relationships.

4. Conflict Resolution Skills: Communication literacy assists individuals in preventing or resolving potential conflicts. Individuals who have developed the skills to understand and accurately express negative situations and conflict resolution skills can communicate more effectively.

5. Social Participation: Communication literacy enables individuals to communicate effectively on social issues. Making public statements, sharing opinions and participating in social issues require this skill.

6. Media and Information Literacy: Communication literacy guides individuals in accessing media and information. It plays an important role in using media tools correctly, accessing and evaluating information (Kocoglu, Sibel, & Gocer, 2023).

7. Credibility and Reputation: Communication literacy enables individuals to communicate in a reliable and reputable manner. Inconsistent communication can lead to loss of trust, so effective communication skills positively affect an individual's reputation.

8. Openness to Learning: Communication literacy supports individuals to be open to learning. It is important for exchanging information, understanding from different perspectives and maintaining learning processes in an interactive way. Communication literacy creates a positive impact on social relations by enabling individuals to communicate successfully, effectively and meaningfully in their personal and professional lives.

New Challenges of the Digital Age

The digital age has also posed new challenges for communication literacy. Issues such as information pollution, online reputation management and digital security are problems that individuals have not faced before. Therefore, communication literacy education should be updated in accordance with the requirements of the digital age (Korkmaz, 2021). The digital age refers to a period in which technology develops rapidly and affects many areas of life. In this period, a number of new challenges and complexities have emerged. Here are some important challenges brought by the digital age:

1. Information Overload and Information Pollution: With the widespread use of the Internet, there has been a huge mass of information accessible to everyone. However, it has become difficult to distinguish correct and reliable information in this mass of information. Information pollution includes problems such as the spread of misleading or false information (Fırat, & Kurt, 2015).

2. Privacy and Security Concerns: In the digital age, individuals' personal information is shared and stored more online. This situation causes privacy concerns and personal information security issues. Risks such as data leaks and online fraud have increased (Mandal, Sağır, Öztürk, Uysal, Külekçi & Büyükakıncı, 2022).

3. Digital divide: Differences in internet access and technology use can deepen the digital divide. In some regions or communities, access to technological infrastructure may be limited, which may increase inequalities in education and job opportunities (Sezgin & Fırat, 2020).

4. Addiction and Distraction: Constant interaction with digital devices can lead to addiction and distraction issues. Excessive use of social media, video games and other online content can reduce individuals' interactions in the real world (Kulu & Özsoy, 2020).

5. Fake News and Manipulation: In the digital age, the spread of fake news and manipulation has increased. Social media platforms can contribute to the rapid spread of such content and reach large audiences. This can affect public opinion and cause social problems (Tekke & Aybala, 2021).

6. Technology Addiction: Constant interaction with digital devices and online platforms can lead to technology addiction. This can lead to physical health problems, social isolation and emotional problems (Ektiricicioğlu, Arslantaş & Yüksel, 2020).

7. Workforce Transformation: Automation and artificial intelligence are transforming many industries and jobs and eliminating some professions. This brings the challenge of adapting to changes in the labor market (Çark, 2020).

8. Online Harassment and Cyberbullying: The digital age has witnessed an increase in online harassment, cyberbullying and other digital crimes. This can threaten the safety and psychological health of individuals (Aslan & Doğan, 2017). These challenges require individuals, communities and societies to adapt to and cope with this new digital age. Topics such as digital literacy, safe technology use, and ethical online behaviors can help overcome these challenges (Akca & Sayımer, 2017).

Technology Literacy

Technology has become an integral part of our lives today. Computers, smartphones, internet and other technological devices greatly affect our daily lives. However, in order to cope with these technological developments and use them effectively, we need technological literacy. Technology has become a force that affects almost every aspect of our lives today. The internet, smartphones, artificial intelligence and many other digital tools have fundamentally changed the way we live and communicate (Tünkler, 2022). However, with this technological revolution, technology literacy has become increasingly important for individuals to effectively navigate this new digital world and make informed decisions.

Definition of Technology Literacy

Technology literacy is the ability of individuals to understand, use and evaluate technological devices. This includes both basic computer skills and the ability to communicate effectively in digital environments, access and critically evaluate information (Ari & Çalişoğlu, 2021). Technology literacy refers to the ability of individuals to evaluate information in digital environments, use digital tools effectively, be aware of online security issues, and keep up with technological developments (Karabacak & Sezgin, 2019). Basic skills include access to information, evaluation, communication and security.

Basic Computer Skills

Computer skills are at the core of technology literacy. Individuals should have knowledge about understanding operating systems, file management, using basic software applications and taking basic security measures. These skills are important for using computers effectively in daily life and in the business world (Arslan, 2020).

Digital Communication Skills

Technology literacy also includes digital communication skills. The ability to communicate effectively via email, social media and other digital communication tools plays an important role in social and business life today. Digital etiquette, online reputation management and other communication skills should also be considered in this context (Talan & Aktürk, 2021).

Access to Information and Evaluation

Technology literacy includes the ability to access and evaluate information. The Internet offers a vast source of information, but it is important to be able to evaluate the reliability of this information. Individuals should be skilled in selecting accurate and reliable sources, evaluating information critically and finding the right information quickly (İlter Tutar, 2023).

Security and Privacy Awareness

Technology literacy requires individuals to be aware of online security and privacy issues. Having knowledge on issues such as password management, using secure internet browsers, and online shopping security is critical for the protection of personal and financial information (Siddiq & Scherer, 2019).

Critical Thinking and Problem Solving Skills

Finally, technology literacy involves developing critical thinking and problem-solving abilities. When faced with technological problems, individuals should have the skills to identify and analyze issues and find effective solutions (Tohara, 2021).

II. Basic Technology Literacy Skills

a. Access and Evaluation of Information: Technology literacy includes the ability to access accurate and reliable information. The Internet provides access to unlimited sources of information, but it also carries the risk of exposure to misleading or deceptive information. It is important that individuals learn to evaluate information critically (Fraillon, Ainley, Schulz, Friedman & Duckworth, 2020).

b. Ability to Use Digital Tools: Technology literacy involves the ability of individuals to use various digital tools effectively. Daily interaction with email, social media, office applications, and other digital tools is a fundamental part of technology literacy (Leaning, 2019).

c. Online Communication and Ethics: Technology has greatly influenced our communication. Technology literacy includes the ability to follow ethical rules in online communication. This includes the ability to communicate respectfully and ethically on digital platforms (Fraillon, Ainley, Schulz, Duckworth & Friedman, 2019).

d. Online Safety: The use of advanced technology brings with it cyber security risks. Technology literacy includes individuals' ability to be aware of online security issues and protect their personal information (Falloon, 2020).

Conclusion

Information literacy has become a vital skill today. Developing this skill will help individuals to be more successful in their personal and professional lives. Information literacy involves not only access to information but also the ability to use that information effectively (Tejedor, Cervi, Pérez-Escoda, & Jumbo, 2020). Therefore, developing this skill will help individuals to act more confidently, consciously, and effectively in the information age (Nurtanto, Fawaid, & Sofyan, 2020). In this section, we explore what information literacy is, why it is important, and how it can be developed (Van Laar, Van Deursen, Van Dijk, & Haan, 2020). Information literacy is a core set of skills to help individuals act effectively in complex information environments. These skills guide individuals in the process of lifelong learning and making informed decisions (Fernández-Gutiérrez, Gimenez, & Calero, 2020).

Information literacy is key to the digital age. It includes elements such as critical thinking skills, access to the right sources and media literacy. Developing these skills protects individuals against information overload and enables them to use information effectively. Information literacy is a lifelong learning process and these skills need to be continuously strengthened (Jones-Jang, Mortensen, & Liu, 2021).

Communication literacy is a fundamental skill for individuals to communicate successfully and effectively. Developing oral, written, digital and visual communication skills provides a competitive advantage in the information society (Roberts & Kruse, 2023). In order to cope with the new challenges of the digital age, it is important that individuals continue to develop and update their communication skills on an ongoing basis (Utami & Wilujeng, 2020). Communication literacy can make individuals more knowledgeable, effective and powerful communicators, which can increase their personal and professional success (Tejedor, Cervi, Pérez-Escoda & Jumbo, 2020).

Developing technology literacy skills is the responsibility of educational institutions and society. In schools and workplaces, educating individuals about the use of technology, safety precautions, and ethics ensures that future generations are prepared for the digital world (Oh, Kim, Chu, & Choi, 2021).

Technology literacy is a critical skill for living and working successfully in the modern world. Developing these skills enables individuals to move confidently in the digital world and make the most of the opportunities offered by technology (Ratnaningsih, Ni'Mah & Hidayat, 2021).

EVENT 1.

Event Name: "Digital Footprint Awareness Workshop"

Objective: This activity aims to make participants aware of their online presence by introducing them to the concept of digital footprint. It also aims to help them learn how to manage their digital footprint and protect their privacy.

Materials:

1. Computers or tablets

2. Projector or big screen

3. Board and pencils

Activity Process:

1. Introduction: (15 minutes)

- What is a digital footprint? A brief definition and a brief explanation about its importance.

- Showing how the digital footprint is formed with examples.

2. Understanding Digital Footprint: (30 minutes)

- Provide participants with an activity to trace their online interactions. This could include social media posts, online shopping history, search history, etc.

- Ask participants to identify their own digital footprint and take notes.

3. ***Privacy and Security Principles: (30 minutes)***

- Focus on basic privacy concepts: password security, two-factor authentication, cookie management, etc.

- Provide practical tips for participants to understand how to protect their personal information.

4. Digital Footprint Management: (30 minutes)

- Providing participants with practical suggestions on how they can reduce and control their digital footprint.

- For example, reviewing social media settings to increase privacy or considerations when shopping online.

5. Conclusion and Discussion: (15 minutes)

- Give participants the opportunity to share their knowledge and discuss their experiences.

- Encourage them to share their challenges or success stories about managing their digital footprint.

This activity will help participants to act more consciously and safely in the digital world.

EVENT 2.

Activity Name: "Journey of Discovery with Historical Maps"

Objective: This activity aims to provide students with the opportunity to use ICT skills in understanding and visualizing history topics.

Materials:

1. Computers or tablets
2. Internet access
3. Maps showing various periods of history
4. PowerPoint or similar presentation tool

Activity Steps:

1. Introduction: The Importance of Historical Maps (15 minutes)

- Tell students why historical maps are important and how they can be used to understand the past.

- Show students sample maps representing various periods of history.

2. ICT Research Task (30 minutes)

- Ask students to search for and download maps covering various periods of history on computers or tablets.

- Ask students to mark important events and places on a map of their choice.

3. Presentation Preparation (20 minutes)

- Ask students to create a presentation representing their maps.

- In the presentation, ask them to include short texts, pictures or graphs explaining the places and events marked on the map.

4. Sharing of Presentations (30 minutes)

- Each student should share their presentation with the class.

- Allow time for questions and discussion with other students.

5. Reflection and Feedback (15 minutes)

- Ask students a few questions to evaluate the activity process and their experience of using ICT skills.

- Give students the opportunity to give feedback on each other's presentations.

This activity offers students the opportunity to use ICT skills in researching, visualizing and presenting history-related topics. It also encourages collaboration and communication between students, making learning more interactive.

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CHAPTER 9: 21ST CENTURY LEARNING ENVIRONMENTS

Assoc. Prof. Dr. Mavi Akkaya YILMAZ

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The Relationship Between Education and Learning Environment

Since the very beginning of their life, human beings are in need of adapting to the environment and recognize it so as to survive. As a natural consequence of this, they acquire knowledge about various things intentionally or unintentionally. Also, while acquiring this knowledge, some changes happen in a person. At this point, it can be said that education refers to the process of changing or creating desired behaviour through one's own experience whereas learning refers to the change in one's behaviour through her/his own experience. In other words, it is possible to define education as the process of creating desired learnings (Senemoğlu, 2015). Furthermore, education pursues different ways of creating these learnings. For the sake of enlightening these different paths, it may be useful to examine the concepts of formal, non-formal, and informal education.

The type of education that is purposefully carried out within the framework of a planned, pre-prepared program is called formal education (Çıkılı, 2019). Formal education is planned and implemented by teachers and takes place in a controlled environment such as schools (Çelenk, 2018). On the other hand, informal education is the education acquired from the environment such as one's family, friends, social and cultural activities, and mass media. It is acquired out of school and continues throughout life and usually emerges in life as a result of the person's interaction with his/her environment without any realization (Şahin, 2019). Apart from it, non-formal learning is sometimes confused with the term informal learning in the literature. Both of them have the same purpose. Nevertheless, non-formal education is performed outside of formal education environments and includes planned and programmed educational activities (Çetinkaya, 2022). In the following table, the distinctions amongst formal, non-formal, and informal education have been explained for making it possible to understand it in a better way.

Table 1

The distinctions amongst formal, non-formal, and informal education

Formal	Non-Formal	Informal
Often at school (Educational institution)	In extracurricular institutions (An institution other than school)	Anywhere
Might be oppressive due to hierarchy	Often supportive	Supportive
Structured	Structured	Non- structured
Often pre-prepared	Often pre-prepared	Natural occurrence
Extrinsic motivation	Both extrinsic and self-motivation	Self-motivation
Mandatory	Often voluntary	Voluntary
Teacher leading	Either teacher or guide leading	Often learner leading
Learning is assessed	Often learning is not assessed	Learning is not assessed
Successive learning	Often not successive	Not successive

(Eshach, 2007, p.174).

Education and training occur in a learning environment where there is no one and only right way, place, or even a single moment to learn something. All our learning occurs constantly thanks to a wide range of sources and in different ways. In addition, it can be obtained through educational institutions, workplaces, or free-choice learning environments (Dierking, 2005). In this regard, it is possible to define learning environments created by educational institutions as environments where students and teachers can interact with each other, acquire knowledge, and combine materials such as the place they share their knowledge, as well as tools and equipment.

21st-century learning environments are innovative learning environments that go beyond traditional academic knowledge and are designed to support students to develop lifelong learning skills and to develop themselves to participate in the labour market on a global scale. These environments should be designed in accordance with current and future needs, which ought to prepare one for 21st-century opportunities and challenges. Such environments support

students' active participation in the learning process. Moreover, these environments enable students to acquire 21st-century skills such as creative thinking, critical thinking, communication, collaboration, and problem-solving. Learning environments are basically shaped by the places where education is physically realized and the forms of education. For this reason, numerous factors are playing an influential role in the classification of a learning environment because another type of education can also be seen in a learning environment dominated by one type of education. For this reason, different classifications can be made. In this study, learning environments are classified as physical and digital.

Physical Learning Environments

Physical learning environments are often described as classrooms, laboratories, museums, natural and historical sites, and other hands-on places. These environments provide students with concrete experiences and practical applications. As it is stated by Abal Abas et al. (2022) there is evidence that students can learn more effectively via supporting each other in physical learning environments. Hence, a peer should support peer learning. There should be empowering, supportive and inclusive spaces (Friend & Bursuck, 2012). In this regard, not only cognitive but also affective and psychomotor development should be encouraged (Hoque, 2016). Physical learning environments should be updated and organized in line with feedback from the stakeholders of the learning process to better meet the evolving needs of students (Closs et al., 2021). A learning environment that conveys positive messages to students is one primary parameter of the factors that significantly support the creation of an appropriate learning atmosphere. Physical learning environments can be divided into in-school learning environments and out-of-school learning environments.

Learning Environments in Schools

Classrooms, science and technology laboratories, computer laboratories, creative and artistic spaces, and gymnasiums are among these environments. To foster 21st-century skills, it is important that these places allow students to engage in collaborative processes of research, investigation, planning, production, presentation, sharing, and discussion. Besides, these spaces should be designed considering elements such as technology integration, flexible furniture, appropriate lighting, acoustics, colour, and air quality.

Classrooms

Classrooms should be designed in accordance with students' interests, needs, and abilities (McCarthy, 2014). Innovative classrooms allow students to apply what they learn and solve problems as they develop their technological literacy skills. They enable students to actively

participate in learning processes and take responsibility (Rands & Gansemer Topf, 2017). Classrooms provide students with flexible access to information in a collaborative manner. Classrooms should help students learn meaningfully and deeply with a contemporary approach that goes beyond traditional teaching methods. Therefore, special attention should be paid to the following aspects while designing innovative classrooms in the 21st century:

Classrooms should be organized so as to make them suitable for different learning styles, collaboration, and group work in order to adapt to changing learning needs. At this point, in order to encourage student mobility, it is important that the furniture in the classroom is light and easily movable and allows for organization. Instead of single or double desks, round or rectangular tables, cushions, pouf seats, stools, and rugs can be used in the classroom. This furniture allows students to prepare themselves according to the activities, sit comfortably, exchange ideas, and interact (Asino & Pulay, 2019; Marmot, 2014).

Classrooms should be designed to be accessible for students with different needs. They should be equipped with appropriate furniture and include screen readers and alternative entry devices to provide equal opportunities for disadvantaged students (Friend & Bursuck, 2012).

The classroom environment should be comfortable and inspiring to enhance active participation and focus. The air quality, temperature, lighting, colour, and acoustics of the classroom should be compatible with a healthy learning environment (Marmot, 2014). Classrooms should support students' cognitive, affective, and psychomotor development.

Photographs, medals, and student work showing students' achievements should be displayed in the classroom (DePorter & Hernacki, 1992). These items develop students' sense of belonging and self-efficacy, help them feel proud of their achievements, and motivate them socially and affective to learn new things.

Classrooms should be equipped with technological tools that enable students to produce, explore, apply, and share their knowledge (Santos & Castro, 2021). In this case, tools such as interactive whiteboards, smart boards, computers, tablets, virtual reality head-sets, augmented reality (AR) devices, 3D projectors, 3D printers, sound systems, and artificial intelligence (AI) applications should be actively used in the classroom. Technology can empower students to access databases, e-books, e-books, audiobooks, podcasts, digital libraries, and interactive educational content using online resources, conduct research, create digital content, prepare presentations, and easily share them on social media platforms to get feedback. Technology support makes it possible for students to learn in a way that suits their different learning styles

and speeds, and to concretize abstract concepts by having learning experiences supported by visual, auditory, and tactile elements. It can also make learning more interactive, engaging, and fun.

In light of the European Green Deal goals, classrooms should be designed in an environmentally friendly manner, taking into account energy savings and carbon emission levels.

Science and Technology Laboratories

Science and technology laboratories provide opportunities for students to conduct scientific research, generate innovative solutions, and develop technological skills by encouraging them to recognize problems, ask questions, generate hypotheses, make observations, and collect and analyse data. Besides, in the twenty-first century, innovative science and technology laboratories in schools should provide students with hands-on experiences, encourage critical thinking, and foster a better understanding of scientific concepts and technological advances (Innova Design Group, 2014). These laboratories should promote scientific and technological literacy by giving students access to the latest technologies. Thus, special attention should be paid to the following aspects in designing innovative science and technology laboratories in the 21st century:

Science and technology laboratories should be equipped with the most up-to-date technological products (Gonzalez, 2019). They should be regularly updated in parallel with developing technologies and scientific advances. Not only classical equipment just like microscopes and test tubes should be used in laboratories but also the labs should make robotic kits, 3D printers, VR & AR tools, and other innovative equipment accessible to students. Considering this it can be stated that apart from classical experiments to test or simulate scientific facts that are costly or nearly impossible to realize, virtual reality applications should also be utilized.

Science and technology laboratories should be safe, clean, environmentally friendly, and sustainable.

Labs should allow students to explore interdisciplinary connections by integrating various scopes like science, technology, engineering, and mathematics (STEM), social studies, history, and geography.

Labs should encourage students to keep up with the latest scientific and technological developments by ensuring that they have access to resources.

Science and technology laboratories should support innovative learning approaches such as Project Based Learning, Context-Based Learning, and Quantum Learning. They should allow students to work in groups and develop a deeper understanding of scientific concepts or technological principles.

Computer Labs

Computer labs should offer students the opportunity to create, share and develop programming, graphic design, and digital content (OnePointe Solutions, 2022). Combining these opportunities, innovative computer labs can provide students with a dynamic and engaging learning environment that promotes skills such as digital citizenship, digital literacy, creativity, and collaboration. Therefore, special attention should be paid to the following aspects in designing innovative computer labs in the 21st century:

It should have an internet network infrastructure that supports reliable and high-speed data flow to support online research, projects, and interactive learning (Voogt et al., 2018).

A digital ecosystem should be established that has the processing power and memory to run multiple devices simultaneously in an integrated manner. Also, it should be compatible with current hardware and curricula and includes a variety of educational software and applications that support different subjects and learning levels (Govender, 2021).

It should offer cloud-based storage that enables students to work together on projects in real-time collaboration, even when they are in different locations.

Essential software such as filtering and antivirus programs should be provided to protect students' digital security and privacy (Bacak et al., 2022).

The necessary software and hardware infrastructure should be supported to integrate artificial intelligence applications into every stage of the learning process (Luckin et al., 2016).

Creative and Artistic Areas

Along with drama studios that support different art forms such as painting, sculpture, ceramics, photography, music, dance, and theatre; creative and artistic areas such as art workshops and music rooms should be promoted in innovative schools. As İskenderoğlu (2022) states, these areas enable students to express themselves, increase their self-awareness, improve their self-confidence, teach them the importance of multiculturalism, and enhance teamwork and original thinking. Therefore, special attention should be paid to the following issues in designing innovative creative and artistic fields in the 21st century:

So as to stimulate students' imagination and curiosity, a variety of inspiring stimuli should be provided (İskenderoğlu, 2022). In these areas, artworks by important artists reflecting different artistic traditions and styles can be exhibited. Furthermore, periodicals or online materials related to art topics can be provided.

These areas should be easily reorganizable according to students' needs. It should encourage students to work together, share ideas, and learn from each other.

Utilizing digital technologies in these areas, students should gain experience in areas such as graphic design, animation, or digital media content production (Avcı, 2013). Besides, computers, sound systems, digital drawing tablets, and photo and video editing software should be made available to students in these spaces.

These areas should have special zones where students can exhibit their work, see their development process or perform their performances (Adar Cömert, 2019).

Art and cultural events should be organized regularly in these areas. Activities such as exhibitions, theatre plays, art and design competitions, concerts, dance performances, artist talks or workshops can bring students together in the common language of art. They can enable different art communities to collaborate from within and outside the school. They can also be used effectively in the acquisition of skills and values (Eurydice Turkey Unit, 2009).

Gyms (Sport Halls)

Sports halls offer students the opportunity to participate in physical activities and develop their skills such as teamwork (Taşçı, 2020). Physical activities improve an individual's thinking, learning, and judgment skills and support the development of a healthy body and mind (World Health Organization, 2022). Innovative gym design should be environments that prioritize inclusiveness, safety, and participation and motivate students. Hence, when designing gyms in the 21st century, special attention should also be paid to the following issues:

Sports equipment suitable for different interests and student levels should be made available for student use (Orhan et al., 2021).

Gyms should be easy to organize for various activities.

Technological elements such as smart equipment providing real-time feedback should be incorporated into gyms for effective and continuous monitoring of student performance development.

There should be areas within the gym for group activities such as team sports. These zones should have appropriate flooring, mirrors, sound systems, and storage space for equipment.

There should be silent zones or areas for stretching exercises to contribute to students' relaxation and affective development.

Natural lighting, large windows, and plants should be used for a bright and energetic environment.

Safety precautions such as soft ground, instructions for use, etc. must be taken.

Disability-friendly and gender-neutral facilities should be provided in sports halls.

Lockers, changing, and shower rooms are necessary to meet the needs of students.

Outdoor Learning & Its Environments

Societies in the world have come to rely more on knowledge than on industry. This has made lifelong learning more important than ever (Dierking, 2005, p.147). In this regard, lifelong learning should not only be viewed in terms of process. This is because these learnings also take place in a place. From this point of view, it is possible to say that a significant part of the learning in our lives takes place outside the school walls. Apart from this, it is seen that expressions such as "outdoor education" (Ford, 1986; Priest, 1986), "nature education" (Aladağ, et al., 2021), "free-choice learning" (Dierking, 2005), "Out-of-school learning" (Eshach, 2006), etc. are used for out-of-school learning activities. At this point, it would be useful to examine the definitions of out-of-school learning environments. According to another definition, out-of-school learning is a learning environment that is planned and programmed but outside the school boundaries, including entertainment and personal interests (Laçin Şimşek, 2020). Besides, the other definition states that out-of-school learning is basically an experiential learning process that takes place outdoors and through experiences (Priest, 1986, p.13). In order to comprehend these definitions in a better way, it would be useful to examine the characteristics of out-of-school learning.

Nichols stated that out-of-school learning takes place outdoors, involves participants directly in the activity, involves the interpretation of original objects, defines phenomena in relationships, involves as many senses as possible, and arouses the desire to participate in learning activities (cited in Tsai, 2006, p.28). In addition to these, Priest (1986) stated that out-of-school education is a learning method, it involves an experiential learning process, it basically takes place outdoors, however, sometimes it can also take place indoors, this

experiential learning should appeal to sight, taste, hearing, touch, smell, and intuition, as well as cognitive, affective and motor areas, it should be based on an interdisciplinary program, and finally, it involves many relationships.

In light of these definitions and characteristics, it is evident that there are different opinions about the place where out-of-school education occur. Nevertheless, it can be said that although a significant part of the learning is carried out outdoors. It is also difficult to say that this learning method cannot be used indoors at all because learning can be carried out in public institutions, libraries, and similar areas. While considering the expression of the main closed area in this learning as a classroom, yet again, it is also difficult to say that learning that is completely disconnected from the classroom environment will always take place. Taking into account that this is a learning method, it is not possible to keep it separate from the achievements of the course. As a matter of fact, Salmi (1993) also sees out-of-school teaching as a bridge between formal and informal education. At this point, considering the characteristics of these types of education, it is difficult to make a definite limitation about the areas where out-of-school education takes place. Nonetheless, it can be said that learning in out-of-school education takes place within a certain program, usually outside the classroom, in an environment that attaches importance to students' experiential learning and intrinsic motivation. According to the classification in the Out-of-School Learning Environments Guide prepared by the Ministry of National Education of the Republic of Türkiye, all museums belonging to state institutions and registered private museums, science and art centres belonging to public institutions, historical and cultural areas designated by the Ministry of Culture and Tourism, libraries belonging to public institutions and literature museum libraries, naturally protected areas and ruins, techno-parks, industrial establishments open to visitors, universities, national, thematic parks, and gardens are specified as areas that can be used in this regard (MoNE, 2019, pp. 3-4). By taking this classification into consideration, out-of-school learning environments were tried to be mentioned.

Museums

Museums are places where artifacts related to history, culture, art and science are exhibited (Buğrul, 2018). It can be said that museums have been used for different purposes in the historical process. It is mostly aimed for people to learn on their own through museums. At this point, museums emerged as educational and cultural institutions in the early 19th century. Since the early 21st century, the importance of museums has increased with the spread of lifelong

learning philosophy. For this reason, it has become an important element to determine the educational and entertaining aspects of museums for everyone (Hooper Greenhill, 1999).

Fundamentally speaking, museums are social and cultural institutions (Leinhardt et al., 2000). This situation prepares the ground for people to visit museums (Falk et al., 1998). Even if the purposes of visits are different, museums are places where people can have rich experiences, obtain a wide range of information and gain life experience. For this reason, they are one of the most important teaching environments. Museums also play an important role in the teaching process as out-of-school learning environments in the 21st century. The contributions of museums to the learning process can be listed as:

Having rich resources in many disciplines such as culture, history, art, science, anthropology, etc., museums support students' research skills. In addition, activities like interactive exhibitions, digital collections, and workshops in museums offer students a deep learning experience (Paykoç, 2008).

Museums, where artifacts from different fields or cultural regions are exhibited together, cater to students' interdisciplinary learning and make connections between different subjects.

Museums offer visitors the opportunity to recognize different cultural heritages and understand the lives of societies. Thanks to museums; values such as empathy, tolerance, and respect can be gained (Dilmaç, 2015).

Museums sparking students' curiosity, allow them to explore, encourage active participation, and support a more permanent learning process. (Paykoç, 2008).

Science and Art Centres

"Science centres the places that appeal to people of all age groups, cultural and educational levels, satisfy their curiosity, answer their questions, and enable them to participate in experiments" (Istanbul Provincial Directorate of National Education, 2019, p.14). Science centres offer various exhibitions, activities, and applied materials in order to introduce children to many fields related to science. visitors do the experiments here themselves. Since it allows them to practice, they get first-hand information (Pilo et al., 2011).

It can be stated that the investigation performed by students in areas related to scientific artifacts as well as areas or artifacts related to works of art will make significant contributions to their learning. Science and art centres offer valuable learning environments that inspire

students and allow them to experience science and art. The contributions of science and art centres to the learning process can be listed as:

Museums encourage students to observe, experiment, discover, and analyse information and help students understand scientific processes (Koyuncu et al., 2016).

Museums present the latest developments in scientific fields to their visitors. In this way, visitors can recognize the latest scientific developments and get an idea about the future of science (Çolakoğlu, 2017).

Museums allow pupils to explore different artistic disciplines such as painting, sculpture, photography, drama, or music, develop their aesthetic understanding and encourage them to think outside the box.

In these centres, students working together in applied group activities and workshops develop skills such as communication and problem-solving by encouraging cooperation and social interaction (Karadeniz, 2010).

Providing a holistic learning environment that activates different senses, museums make what is learned meaningful and permanent (Pilo et al., 2011).

Museums demonstrate with practical examples how scientific or artistic principles are used in various scopes.

They appeal to students of all ages, encouraging lifelong learning.

Historical & Cultural Areas

Historical sites are composed of historical buildings left by people in the past for use or to create works and places where historical events took place. From this point of view, the historical place can be formed by complexes with intact historical texture such as mosques, madrasahs, mausoleums, mausoleums, tombs, tombs, fountains, and houses, as well as a place where an event and a war that shaped the fate of a nation took place or a place where a person was born and lived (Ata, 2002).

Historical and cultural sites offer unique opportunities for historical inspiration, establishing empathy, and critical thinking. They play an important role in the 21st-century learning process. The contributions of historical and cultural sites to the learning process can be listed as:

One can obtain a deeper intercultural understanding by visiting historical and cultural sites, and it helps to understand historical phenomena by visiting historical and cultural sites (White & White, 2000).

It encourages students' sense of discovery and curiosity.

Museums foster respect and tolerance for different cultures by gaining insights into different perspectives, traditions, and ways of life, which contributes to the development of global citizenship and intercultural understanding for a deeper level of global citizenship and intercultural understanding.

Students can interpret and analyse historical evidence by accessing primary sources during their visits (Yeşilbursa, 2008).

Libraries

The existence of libraries dates back to ancient times and the oldest known library was established in the 7th century BC during the Assyrian period. In other words, the history of libraries extends back to Antiquity. Nevertheless, librarianship emerged in the 19th century, and in this century, there has been a significant increase in the number of books in the West. this situation has brought a different dimension to librarianship. Previously, it was considered sufficient to read a lot of books, whereas, after a period of time, librarians were expected to have organizational and managerial skills, as well as to develop methods to ensure fast and easy access to books (Istanbul Provincial Directorate of National Education, 2019).

Although we have access to numerous digital resources in this era, physical resources still maintain their importance in accessing information. Students' access to resources in libraries can contribute to them in many ways such as feeling the historical texture, learning, and using the library classification system. Libraries, which were once seen as book depositories, have transformed into dynamic learning spaces that offer a wide range of resources and services in the 21st century. The contributions of libraries to the learning process can be listed as:

Libraries provide free access to a large collection of books, periodicals, e-books, and online databases. By facilitating access to information through these resources, libraries help their visitors develop research skills such as evaluating different sources for reliability and synthesizing information (Bertot et al., 2012).

Libraries are lifelong learning centres that develop the love of reading and literacy skills of individuals of all ages (Ersoy & Yılmaz, 2009).

Libraries create opportunities for personal development through workshops, conferences, author visits and technology training (Önal, 2010).

Libraries contribute to the development of individuals' digital literacy skills by offering free Wi-Fi, computers, and software applications (Ergün & Güneş, 2022).

Natural Protected Areas and Ruins

Natural sites are areas that belong to geological eras and have exceptional characteristics due to their rarity and need to be protected above ground, underground, or underwater. Meanwhile, the name "ruins" is given to the products of various civilizations from prehistoric times to the present day, which have sufficiently distinct and coherent features that can be defined topographically, and is also remarkable in terms of historical, archaeological, artistic, scientific, social or technical aspects, partially built, where human labour cultural assets and natural assets are combined (Istanbul Provincial Directorate of National Education, 2019, p. 193). It can be said that these areas are important centres in terms of allowing students to learn geographical features, climate, history, and so many other things by seeing them in place.

Technoparks

The concept of technopark emerged in a definitional sense with the Stanford Research Park established in Silicon Valley in the United States in 1951, and technoparks today refer to platforms or organizations where companies operating in the category of science and technology-based industries and aiming to generate income from them by developing products and services based on research and development (İmer et al., 2021, p. 408). Technoparks cater to many areas such as economic development. Also, these contributions include the transformation of university-industry relations into concrete cooperation, the establishment of new high-tech-based companies and the growth of small companies, the transformation of academic knowledge in universities into technological products, and the realization of technology transfer (Istanbul Provincial Directorate of National Education, 2019). The contributions of technoparks, where advanced technological infrastructure and digital technologies are intertwined, to the learning process in the 21st century can be listed as:

Considering the scope of Technopark visits, students can have access to state-of-the-art equipment, software and prototypes. They can experience these and broaden their horizons (Bayram & Çelik, 2022).

These visits provide students with a hands-on and immersive learning experience.

Students can communicate with people and entrepreneurs working in various fields related to technology. These visits can help students choose careers (Dönmez, 2021).

Industrial Organizations

Industrial organizations have an important place in the economy of countries. They have a valuable place especially in production. For this reason, visiting industrial organizations with students will contribute to them in various ways. According to Istanbul Provincial Directorate of National Education, (2019) these contributions can be listed as:

Students can observe the production and distribution chain by making on-site observations, so that a more meaningful learning takes place by reinforcing the theoretical knowledge with practical examples.

By observing the process of transforming labour into a product, students get an idea about the contribution of employees to the country's economy.

These organizations also help students to recognize different business lines, to realise employment opportunities, and to shape their career planning in line with their interests.

National Thematic Parks and Gardens

When it comes to the use of parks and gardens in education, it can be said that these areas are very valuable in terms of providing life experiences. Since out-of-school learning environments appeal to various disciplines, many fields of education can benefit from these spaces for the teaching of their own discipline.

In terms of science and aesthetics, national and international rare natural and cultural resource values and pieces of nature with protection, recreation, and tourism areas are called national parks (National Parks Law, 1983). National parks emerged for the first time in the USA. The American Congress declared the Yellowstone National Park for the first time in 1872. The second and third national parks were declared 17 years later (Yücel & Babuş, 2005). Yozgat Çamlığı National Park is the first national park in our country. Currently, there are 48 national parks in Türkiye (General Directorate of Nature Conservation and National Parks, 2023).

National parks can contain flora, morphological forms, hydrographic resources, large areas with historical ruins, and even some villages and towns. Owing to their resources, national parks are open-air laboratories where serious scientific research can be conducted (Yaşar, 2000, p. 182)

Botanical gardens are living and learning spaces organized to reflect the kinship relations between plant groups. It was established for the first time in the world to research plant species in universities. After that, plants for medicinal purposes started to be grown in botanical gardens. Of late, while these gardens are used for scientific purposes, they also provide various contributions in terms of education. Botanical gardens give visitors who come for educational purposes the opportunity to explore the natural habitats of living things, develop their own environmental awareness, and learn by doing experiments and activities (Nuhoğlu, 2020, p. 115). The contributions of the national thematic park and garden visits to the learning process in the 21st century can be listed as:

They enable students to learn about nature, biodiversity, history, culture, climate change, etc. (Kocalar, 2016).

They develop students' environmental awareness about the protection of ecosystems and natural resources and the sustainable utilization of these resources (Boca & Saraçlı, 2019).

They offer various opportunities for students to connect with nature and observe what they learn at school (Packer & Ballantyne, 2002).

Group visits to these parks can strengthen students' cooperation, communication and social skills.

Overall, visiting national thematic parks and gardens can offer a holistic and enriching learning experience, foster environmental awareness and strengthen a lifelong connection with nature.

Digital Learning Environments

Education is one of the scopes that trigger and are affected by technological developments. In parallel with technological developments, some changes occur in learning environments. Digital technologies are one of the most important tools that enrich the learning environment and facilitate the learning process. Digital technologies allow students to access a variety of content appropriate to their learning styles in the learning process. They support students to learn individually and in groups. Digital learning environments enable students to be actively involved in educational processes.

In parallel with changing educational needs, digital technologies are becoming more and more important in shaping the learning environment. This is because digital learning environments allow both educators and students to quickly prepare, organize and share content,

making the educational process more effective and engaging. This section provides information about digital learning environments, discusses their advantages and limitations, and evaluates their integration into education.

Web 2.0 Tools

The Web concept, which was introduced to our lives with the emergence of the Internet, has undergone a number of transformations over time in the context of user demands and technological developments. The Internet, which initially emerged with the concept of unilateral information sharing, has evolved over time to become an environment where users can share content and interact with each other. Especially with the widespread use of Web 2.0 technology proposed by O'Reilly (2005), allowing users to produce and share content without the need for advanced technical knowledge has led to a significant transformation in digital learning environments.

Web 2.0 is a more personalized, second-generation interactive online platform that enables users to actively participate, communicate, collaborate, and share information and ideas (McLoughlin & Lee, 2007). Web 2.0 technology offers many visual and audio tools that enable users to create websites and share content such as images, text, animations, videos, or stories (Kamalı Arslantaş, 2022).

Nevertheless, the disadvantages of Web 2.0 tools include user-unfriendly interfaces, security, and the fact that many educational platforms are paid. Meanwhile, the number of Web 2.0 tools and the opportunities they offer are increasing day by day and are frequently used in educational environments (Altıok et al., 2017). By using Web 2.0 tools, which are called second-generation web, the teaching environment can be enriched and a more effective and interesting learning environment can be offered. Çelik (2021) has provided some examples of how Web 2.0 tools can be used in educational environments, which have been listed as:

Various Web 2.0 tools have been developed for use in educational settings. For example, MindMaple Lite or Mindmeister can be used to create mind maps to visually organize ideas and information.

To help visualize lessons, teachers or students can use apps like Canva, Padlet, Prezi, Powtoon, Emaze or Blendspace to create effective presentations, animations or boards.

Tools such as Canva and Toondoo can be used to create posters and cartoons that engage students.

Tools just like Pixton and Storyboard That can be used for students to create original stories and books with fun; Filmora, OpenShot and GIMP can be used for photo, movie and video editing and design.

Students can use tools just as Evernote and Blogger to organize course materials, take notes and create and share a blog.

Tools such as Kahoot, Plickers and Socrative allow teachers to create tests, puzzles and quizzes for assessment.

Easelly and Piktochart can be used to create information posters and infographics that allow students to visualize complex data in a simple way.

Tools such as YouTube, Skype, Whatsapp, Facebook and WebQuest offer students and teachers the opportunity to share their content and learn interactively.

Distance education and virtual classroom application platforms such as EBA, Google Classroom, Edmodo, and Moodle can be used, which offer the opportunity to attend classes online from anywhere and provide an interactive environment between students and teachers.

Augmented Reality

Augmented reality (AR) technology is a virtual technology that combines real and virtual images and is interactive in real time (Azuma, 1997). It has an interface that combines the real world and the virtual world, creates content that allows users to blend their physical environment with virtual objects, and provides a natural and realistic human-machine interaction experience (Chang & Chung, 2016). It helps to bridge the virtual and real world (Lai & Cheong, 2022).

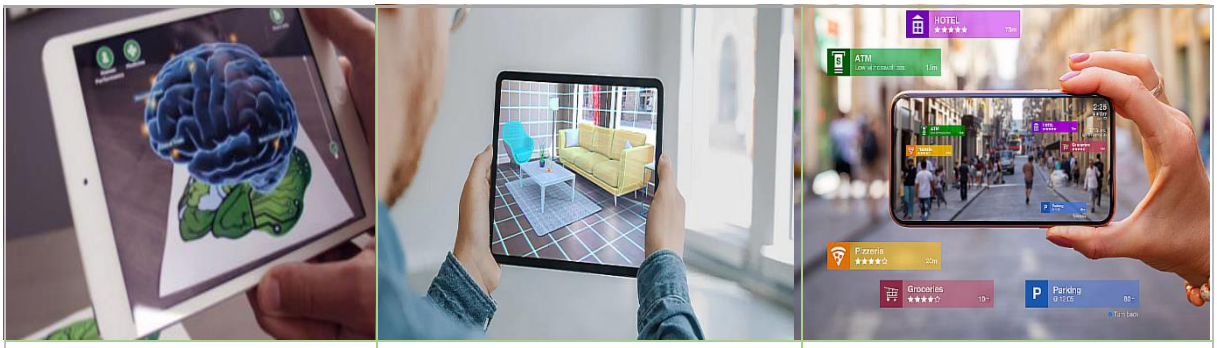
Augmented reality enriches the environment the user is in by adding digital content such as three-dimensional objects, models, videos, texts, sounds. It presents the physical environment that the individual perceives without detaching from the reality environment by combining it with virtual objects using object recognition technology. Through this technology, virtual objects are superimposed on the image of an object perceived with the sense organs to enhance their reality.

One of the most difficult issues in teaching environments is that students cannot grasp complex and abstract concepts that cannot be visualized (Wang et al., 2018). Through augmented reality, students can interact with virtual objects, images, or texts superimposed on the real world and see them in three dimensions. This contributes to a better understanding of

relatively complex, difficult-to-understand, or abstract topics and concepts by visualizing them (Wojciechowski & Cellary, 2013). It allows theory and practice to be combined.

Augmented reality applications have three distinctive features (Azuma, 1997). These can be described as presenting the real and the virtual together without isolating the user from the environment, being three-dimensional and simultaneous interaction. Thanks to these features, augmented reality applications contribute to making the learning environment more interesting, innovative, and immersive (Delello, 2014; Sırakaya, 2022).

So as to use augmented reality, augmented reality applications are needed through devices such as AR headsets, smartphones, and tablets (Künüçen & Samur, 2021). There are several different types of AR developed, including marker-based AR, markerless AR, and location-based AR. These have been demonstrated in Figure 1.



Marker-based AR	Markerless AR	Location-based

Figure 1. *Marker-based AR, Markerless AR and Location-based (Bandgar et al., 2021; Program-Ace, 2020; WeAR Studio, 2019).*

In marker-based AR applications, a marker must be present in the physical environment for the system to recognize and track an image. The marker acts as a reference point to determine the location of virtual objects. The AR experience is activated through the marker predefined to the system (Kamalı Arslantaş, 2022). Examples of marker-based Augmented reality applications include QR codes, AR business cards and AR games (Pokemon Go, etc.).

Markerless AR does not require a marker in the environment. It uses the camera or sensors of the device to recognize and track the object (Bruno et al., 2019). It is more flexible and versatile than marker-based AR because it does not require a marker and can work in any environment. Snapchat filters, which are frequently used on smartphones today, are an example

of this technology. Thanks to this application, no marker is needed when adding animated filters to the user's face in real time.

Location-based AR uses location information to provide contextual knowledge about places and virtual objects around the user (Gümüş & Boydaş, 2021). Navigation applications, AR-based tour guides, or games such as Wizards Unite are location-based AR applications.

AR is still an emerging technology. Hence, AR environments in education need to be carefully designed in accordance with pedagogical principles, and more research is required on the potential risks and benefits of its use (Lai & Cheong, 2022). For instance, AR environments may have technical, security, and ethical issues such as bugs, compatibility, accessibility, usability, etc. that may negatively affect the user experience (Tuli et al., 2022). In addition, since the majority of these applications are designed for gaming purposes, there is a lack of education-oriented quality content that is compatible with the curriculum and in accordance with pedagogical rules.

Immersive teaching created thanks to Augmented Reality (AR) technology offers visual, auditory, and haptic feedback, enabling more interaction with learning and educational content. Some examples of how augmented reality can be used in educational environments can be listed as:

AR can be used to visualize complex scientific systems or concepts, such as human body systems, in an interactive and engaging way.

AR can be used to simulate costly and dangerous experiments in safe environments and demonstrate scientific principles.

AR can be used in language education to improve students' speaking, listening and reading practices.

AR can be used to make traditional textbooks more engaging by adding interactive elements.

AR can be used to create virtual field trips in history, art and environmental education.

Virtual Reality (VR)

The concept of virtual reality was first introduced by Sutherland (1965) when he defined it as a window through which a user can see, feel, hear, and act realistically in a virtual world. It is a technology that has been actively used especially in the past 30 years. It is a relatively older technology than augmented reality. Recently, many companies have made significant investments in this technology (Cipresso et al., 2018).

Virtual reality environments isolate the user from the real world and offer a completely virtual environment (Mandal, 2013). VR systems have three main determinants: immersion, the perception of being in an environment, and interaction with that environment (Cipresso et al., 2018). Although there are different ways to categorize VR systems, it is possible to examine them in three categories according to the degree of realism and engagement that the user experiences in the virtual environment. These are non-immersive systems, semi-immersive systems and immersive systems:

Non-immersive systems generally consist of a computer screen or projection system that displays a three-dimensional image. It is known as the simplest VR system. The computer screen is available to use through devices such as smartphones, tablets, and low-cost VR headsets. The user can control some characters or images within the software using an input device such as a keyboard or mouse, nonetheless, s/he cannot directly interact with the virtual environment (Bevilacqua et al., 2019). Non-immersive systems are also referred to as "desktop VR" systems in the literature (Rahim et al., 2021). Video games such as World of Warcraft or The Sims, which provide users with the experience of interacting and playing a role in a virtual world, can be examples of such systems. Such games allow the user to create and customize their own avatar and interact with other users online. Virtual museum tours created with 360-degree videos or photos also use these systems. In these tours, the user can walk around the museum, zoom in and out of some artworks or click on them to get more detailed information about them.

Semi-immersive systems are based on the idea of surrounding the user with a three-dimensional environment (Parke, 2005). These systems generally require the use of large screens or projectors (Wei Te & Chen, 2020). Semi-immersive systems often include other technologies such as motion tracking, head-mounted displays and hand-held controllers to allow the user to interact more directly with the virtual environment (Meissner et al., 2020). Examples of these systems where the user's connection to the real world is partially preserved are flight and driving simulators or some 3D cinema systems.

Meanwhile, immersive systems are the most advanced VR systems. These systems usually use head-mounted displays (HMDs). The user's field of view is completely surrounded (Fusco & Tieri, 2022). It is abstracted from the real world. The user can interact with and explore the virtual world in three dimensions (Freina & Ott, 2015). User movements can be tracked in real-time (Steed & Schroeder, 2015). Along with motion tracking, these systems can also use other technologies such as haptic feedback and spatial audio for a more realistic experience (Kim

Jeon & Kim, 2017). Such systems require high-quality graphics, sounds, and tactile sensations because the main purpose of these systems is to provide a realistic experience for the user.

The advantages of using virtual reality (VR) in education include increasing students' academic achievement, the potential to create immersive and engaging authentic learning experiences, and the ability to teach skills and procedures in a safe and controlled environment. Nonetheless, the applicability of VR in education also needs to be improved (Dreimane, 2020). To illustrate, these devices are not ergonomic (Ciccone Bailey & Lewis, 2023), have limited charging times (Browd et al., 2021), nausea, dizziness (An & Park, 2018), vertigo (Viirre & Ellisman, 2003), loss of sense of reality and addiction (Merkx & Nawijn, 2021), the cost of setting up and running it (Freina & Ott, 2015), the lack of technical expertise and educational content in line with pedagogical principles (Chen, 2006), and the need for a dedicated space (Freina & Ott, 2015), all of which can lead to some limitations.

Virtual reality (VR) technology has the potential to provide immersive, realistic, and interactive learning experiences that can be used effectively at every stage of the learning process (Daniela & Aierken, 2020). Some examples of how VR can be used in educational environments have been listed as:

VR can be used to simulate scientific facts or skills training that is too costly, dangerous, or impractical to perform. For instance, VR can be used to provide emergency response training to a medical student, flight training to a pilot candidate, disaster training to a student, or experiment with different variables in a virtual laboratory.

VR can enable students to take virtual field trips. For example, students can go on virtual field trips to an ancient civilization as part of the history course, to different climatic regions of the world as part of the geography course, or to a planet as part of the science course, making observations together and interacting with the content. In this context, students can watch 360-degree images of a historical event, hear people's voices, and feel their emotions.

VR can offer significant opportunities in the education of disadvantaged students. For example, a student in a wheelchair can go on a nature trip as part of an environmental education course, or a hearing-impaired student can participate in a virtual lecture with subtitles.

VR allows people to create their own avatars and socialize in different virtual environments such as a schoolyard, a library, a movie theatre, or a concert venue. In this way, they can come together with different people and learn something, improve their language skills, participate in educational activities, or listen to a conference.

Conclusion

All organisms try to adapt to the environment in which they live in order to survive. In fact, this is a natural need and human beings also feel this need. Nonetheless, the cognitive structure of human beings is more developed than other living beings. This situation causes him to scrutinize his environment more. Naturally, the science of education deals with the changes that will occur as a result of these examinations. These changes take place sometimes in nature and sometimes in structured environments. At this point, from a broad perspective, all of the environments that cause human beings to change can be called learning environments. In this study, physical and digital learning environments have been addressed.

Learning can take place physically in school or out-of-school environments. Learning inside the school takes place mainly within a plan and program while learning outside the school can be planned or natural. Educators can effectively contribute to students' planned learning. For this reason, this study focuses on planned educational environments and their effects on students. Generally speaking, it has been observed that the advancement of science and technology and the increase in knowledge have paved the way for new learning environments, and it can be said that any environment that is planned within the scope of the acquisitions in the school curriculum can be used as a learning environment. As a matter of fact, various learning environments will make significant contributions to students' learning as they will increase their life experience.

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CHAPTER 10: ASSESSMENT OF 21ST CENTURY SKILLS: A SAMPLE ACTIVITY FOR SOCIAL STUDIES

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Introduction

Advances in information and communication technology in the 21st century have also led to a transformation process in education. This transformation focuses on learner-centered learning approaches and technology-supported learning tools as well as traditional learning methods. Education plays a vital role in developing the knowledge, skills, attitudes and values that enable individuals to contribute to and benefit from an inclusive and sustainable future (OECD, 2018). Particularly in today's world where cognitive skills are digitized and jobs are changing rapidly, education systems should give due importance to enabling individuals to become lifelong learners and manage complex ways of thinking and working that the computers cannot assume (Schleicher, 2012). The quality of teaching activities realized in and out of school within the scope of the education system is vital in preparing today's children for adult roles as citizens, employees, administrators, parents, volunteers and entrepreneurs, and transforming them to be able to overcome future challenges (National Research Council, 2012). Not only individuals, but also institutions, brands, cultures and countries have to plan for the future. For this reason, educators strive to develop learning and teaching theories, models, approaches and skills in the context of education (Gelen, 2017). At the point reached today as a result of the ongoing evolution of education throughout history, education sets diversified educational goals that focus on the needs of learners (Kaufman, 2013). Education is a tool that shapes and reproduces the social structure. Therefore, it is not possible to consider social, political and economic changes in society separately from education.

Education in the 21st century aims to provide individuals with skills and competencies rather than knowledge by revealing their capacities and abilities and integrating their knowledge, skills and competencies (Uçak & Erdem, 2020). The phenomenon of globalization, the rapid spread of information and its accessibility by large masses, the necessity of living together with different cultures, the developments in science and technology as well as the emergence of wars, natural disasters, and environmental problems cause individuals to face technological, economic, social and cultural changes more than ever before. Individuals need to have high-level skills and competencies in addition to basic skills

in order to adapt to the changes and technology, obtain information from rapidly produced information stacks, analyze and evaluate this information, use it in daily life and turn it into a product. These skills and competencies that individuals must possess are called 21st century skills (Anagün et al., 2016). Today, the term 21st century skills is used to refer to a wide range of competencies, mental habits and qualities that are considered important to citizenship in the 21st century (Ercikan & Oliveri, 2016). Although there are other definitions and explanations for the skills that individuals should acquire in the 21st century in the literature, the 21st century skills described by the Partnership for 21st Century Learning (P21, 2009) have become more prominent (Kalemkuş & Bulut-Özek, 2021). The Partnership for 21st Century Learning (P21 Skills, 2019) defined 21st century skills as the knowledge and skills that learners need to possess to be successful in business, life and citizenship.

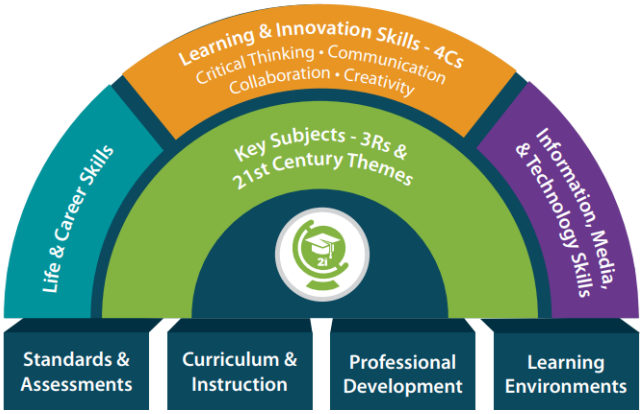

Figure 1. *Framework for 21st century learning (P21, 2019)*

In this context, the skills and competencies that an individual should possess are as follows:

a. Key Subjects (3Rs) & 21st Century Themes

Mastering key subjects and 21st century themes is critical to learners' success. Key subjects, in other words, 3Rs, that is, reading, writing and arithmetic, include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history and civics. The interdisciplinary themes to be integrated with the key subjects and thereby to facilitate the understanding of the academic content include global awareness, and financial, economic, business, entrepreneurial, civic, health and environmental literacies (P21, 2019).

b. Life & Career Skills

In today's world, learners need to develop the necessary thinking skills, content knowledge, social and emotional competencies in order to survive in complex life and work environments. These life and career skills are: Flexibility and Adaptability Skills, Initiative and Self-Direction Skills, Social and Cross-Cultural Skills, Productivity and Accountability Skills, and Leadership and Responsibility Skills (P21, 2019).

c. Learning & Innovation Skills (4Cs)

Learning & innovation skills are the skills that distinguish learners who are ready for increasingly complex life and work environments from those who are not. Learning & innovation skills, in other words, 4Cs, are Creativity and Innovation skills, Critical Thinking and Problem Solving Skills, Communication Skills, and Collaboration Skills (P21, 2019).

d. Information, Media & Technology Skills

Information literacy, media literacy, and information, communication and technology (ICT) literacy are the skills that effective citizens and employees should be able to exhibit in a technology and media-oriented environment where information can be accessed conveniently, technology tools change rapidly, and the ability to cooperate and contribute individually come to the fore (P21, 2019).

The Partnership for 21st Century Learning recognizes that all learners need educational experiences in school and beyond to gain the knowledge and skills required to be successful in a global and digitally interconnected world (P21, 2015). It is important for individuals to possess these skills in order to compete in rapidly changing life conditions and be successful in their professional lives. 21st century skills, given the change in the needs of the learners and the corresponding change in the competencies of the teachers who train these learners, play a significant role not only in education but also in the holistic development of the individual to become responsible citizens. If individuals are to adapt to the 21st century world, they need to have the skills that will enable them to live within the framework of certain standards (Acedo & Hughes, 2014). Therefore, individuals who can produce solutions to the problems they face, who can think critically and creatively, who are entrepreneurial and open to innovations, who can communicate effectively and use technology competently, are important for the future of societies.

The 21st century is being shaped in line with the ideal of information society and economy. However, the education still focuses on problem solving and getting results based on a project and design-oriented approach rather than the intellectual value of knowledge (Uçak & Erdem, 2020). There are many approaches to defining 21st century skills, but they all focus on what learners can do with the knowledge they have acquired and how they can use what they have learned. 21st century skills, at their core, include strong communication and collaboration skills, technology expertise, innovative and creative thinking skills, and problem-solving skills (Larson & Miller, 2011; Tünkler, 2022). These skills also relate to the thinking processes and behaviors that learners will use when learning relevant content and working with others to deepen their understanding of the content. Educational institutions around the world should encourage their students to develop 21st century skills through formal education (Beers, 2011; Tindowen et al., 2017). In particular, it is necessary to strengthen the idea that teachers should be effective in the active use of 21st century skills in the learning environment, and trainings should be carried out to that effect (Acedo & Hughes, 2014). Curriculum, which has a key role in teachers' adoption and effective implementation of this educational approach, should be harmonized with this perspective.

21st century skills should be organized in coherent systems, curricula should be developed and adapted to include these skills, teaching approaches for teaching such skills should be taken into account and teaching materials should be developed in this direction (Geisinger, 2016). We expect individuals to acquire these skills so that they can function effectively at every stage of their lives. Integrating these skills into curricula, in-class or out-of-school teaching activities and process evaluations will change the teaching approach and give a new direction to our understanding of education.

In this regard, it is expected that the learning outcome, content, learning-teaching process and assessment components of the curriculum will be compatible with each other, that the curriculum will be equipped with 21st century skills and will facilitate learning. Among these four components, particularly the assessment component which features the evaluation of a holistic learning based on self-regulation and self-efficacy that emphasizes different learning styles and makes the learner aware of their own learning draws attention in a qualified curriculum.

Assessment of 21st Century Skills

The assessment of 21st century skills, which is part of the analysis of the relevant skills and abilities, is just as important as developing these skills. Skills teaching is necessary for learners to be successful in their professional lives and to retain their learning skills throughout their lives. The aim of education, which continues to change and evolve in the 21st century, is to prepare learners for the future. Therefore, the assessment of necessary skills should be designed to provide the necessary information to determine students' ability to cope with real-life situations. However, the existing and standardized assessment practices fail to achieve this goal (Aghazadeh, 2019). The learners who take responsibility for learning must fully understand the learning process and be aware of their own learning (Acedo & Hughes, 2014). In this regard, teachers need to make more efforts in order to ensure that learners take responsibility for their own learning.

Assessments serve an important function, motivating learners to learn. Assessments directly help teachers improve their practices and skills, and indirectly help improve education systems. Assessments can also be used to verify learners' success, evaluate the output of educational programs, measure the progress of education systems, and make comparisons between systems (Griffin, McGaw & Care, 2011). More specifically, assessments can turn into powerful teaching tools when used to assist learners. In other words, assessments can help learners clearly articulate the goals they would like to achieve at the end of a particular process and provide them with feedback on their current levels (Marzona & Heflebower, 2011). Feedback helps students identify their strengths and weaknesses.

21st century skills can be assessed through exposing students to well-designed complex tasks and interaction with other peers and trained professionals (Rupp et al., 2010). Although assessment, as an indispensable part of learning, at first reflected the teacher's view on learner's behavior, over time it has focused on high-level thinking processes along with 21st century skills and an observation-based process, where learners are aware of this processes. In this regard, assessment prognosticates successful individuals, successful schools, and therefore successful societies, who can transfer what they have learned into their lives and respond to the needs of the society and the individual.

21st century skills are not only complex in nature but also complex to assess. Assessing these skills in the context of their specific uses requires innovative assessment methods (Scoular et al., 2020).

The assessment methods used today such as multiple choice, true-false, matching, and gap-filling questions, which are commonly structured based on traditional approaches that focus on basic knowledge and skills, are insufficient in assessing knowledge and skills. In particular, these assessment methods do not provide enough information about the level of learners' acquisition of knowledge and skills with regards to any specific discipline and to what extent they practice these knowledge and skills in their lives (Kutlu, Doğan & Karakaya, 2017). When it comes to learner success, these assessment methods do not provide sufficient information to both the learner and the teacher. Therefore, assessment and evaluation tools based on alternative/modern approaches should be used more compared to assessment and evaluation tools based on traditional approaches. In the context of mental skills, assessment and evaluation tools based on alternative/modern approaches generally assess high-level thinking skills, whereas assessment and evaluation tools based on traditional approaches generally assess low-level thinking skills (Kutlu, Doğan & Karakaya, 2017). In this regard, if it is aimed to keep up with the modern age and fulfill the requirements of this age, it is clear that it is necessary to possess 21st century skills featuring high-level thinking skills.

Learners' ability to use more than one skill together and internalize these skills and associate them with their individual self-efficacy requires the active use of high-level mental processes. For this reason, it is very important for the teacher to guide the students within the framework of their individual competencies based on the requirements of the curriculum and to structure this process correctly. From this point of view, methods such as performance-based assessment, authentic assessment, portfolio assessment, scoring rubric, self-assessment, peer assessment, and group assessment should be used to determine to what extent the learning outcomes of the curriculum have been achieved (Kutlu et al. 2017; Soland et al., 2013). Students who realize their strengths and weaknesses by making use of these methods can take responsibility for their own learning and make inferences by evaluating their thoughts on their own learning (Kutlu et al., 2017). This process, which focuses on self-assessment, will enable learners to activate their metacognitive skills and gain self-regulation skills in respect of their learning through participation in self-assessment activities. In this regard, it is essential that learners who can constantly use high-level mental processes such as communicating effectively, looking at events or situations with a critical perspective, finding solutions to the problems encountered and making decisions, which have become the vital skills of the 21st century, should be assessed based on various assessment tools within the framework of an alternative assessment approach, and that they should be able to make

self-assessment. The diversity of assessment tools also enables the development of cognitive, affective and psychomotor development areas. In this regard, the compatibility of the curriculum with its components is important. Therefore, it is especially emphasized in the curricula that the assessment process should engage the students and teachers together, consist of measurements that take into account individual differences, and be constantly followed (MEB, 2018). In general, the assessment processes are discussed in the said framework in all disciplines. In specific, when it comes to the Social Studies course, the learning outcomes in respect of the seven learning areas, i.e., "Individual and Society", "Culture and Heritage", "People, Places and Environments", "Science, Technology and Society", "Production, Distribution and Consumption", "Active Citizenship" and "Global Connections", should be taken as the reference point in the assessments throughout the learning and teaching process. In addition, the assessment-evaluation dimension in the affective domain should be enriched with the values education included in the social studies curriculum. The adoption of student-centered teaching methods that take into account individual differences in the social studies curriculum necessitates multiple assessments in order to assess students' knowledge, skills and attitudes (MEB, 2005). In this context, the 21st century understanding of education brings to the fore methods that focus not only on theoretical knowledge but also on practical applications, aiming at gaining the skills that individuals need to be successful in life. Given the inadequacy of the traditional assessment tools (multiple choice tests, open-ended questions, true-false questions, matching questions, etc.) used to identify the weaknesses of the students in their learning processes and monitor their progress, in assessing the skill development of the students and determining their personal learning goals, the multiple assessment system used instead should support multiple developmental areas and meet the needs of the age. Therefore, the inclusion of brief information notes on the content of assessment tools prepared according to the alternative assessment and evaluation approach as well as the application examples of these assessment tools, including performance tasks, authentic assessments, student portfolio assessments, rubrics, self-assessments, group assessments, peer assessments, project works, posters, situational judgment tests, and likert-type tests, in the social studies course in a section of the book would be beneficial for preservice teachers and teachers.

Authentic Assessments

Authentic assessment is a general term used to describe a number of new approaches to assessment. In the literature, it is also used to describe alternative evaluation methods such as

performance-based assessment and portfolio assessment (Herrington & Herrington, 1998). It is a type of assessment that points out the use of knowledge and skills outside of school, emphasizing the evaluation of students' performance while performing mental tasks popularized by Grant Wigging (1989) (Marzano, Pickering & McTighe, 1993). Authentic assessment consists of student work and performance that emerges as students form and develop ideas with their peers, allowing students to integrate learning and practice (Martinez, 2013; Ozan, 2019). Authentic assessments help students apply the skills they have learned to real life applications, and in this way, they can see how they can produce solutions to the problems in life, rather than just repeating and memorizing the information.

With authentic assessments (Collins, 1991, as cited in Knobloch, 2003);

- students learn to apply the knowledge they have learned,
- the learning environment created encourages students' innovativeness and creativity,
- students see the outcomes of knowledge, and
- students learn that knowledge is organized for appropriate uses in context.

Authentic learning generally focuses on complex problems such as role-playing exercises, problem-based activities, case studies, participation in virtual practice communities, and to the solutions of these problems. Authentic learning engages multiple disciplines and multiple perspectives beyond the content of the relevant subject. Students can use digital tools to interpret and evaluate complex information, considering multiple perspectives and alternative solutions (Lombardi, 2007; Thieman, 2011). Authentic assessments help teachers design the teaching process around student skills by providing feedback on how well students understand the information and what skills they need to develop. An example of a performance task and checklist for social studies course' learning outcome is given below.

Application Example

Course Name: Social Studies

Grade Level: 4

Learning Themes: Production, Distribution and Consumption

Recommended duration: One week

Learning Outcome and Indicators: To exhibit conscious consumer behavior as a responsible individual (SS.4.5.3.).

Skills: Productivity and Responsibility, Collaboration, Communication, Critical Thinking and Problem Solving

Materials, if any: **-**

Setting: **-**

Context

Performance Task

Dear students, it is expected from you, as responsible individuals, to examine the situations that should be considered before, during and after shopping by considering the characteristics of the conscious consumer, and to reflect the notes you will prepare on a poster about what you do as conscious consumers during your shopping process by considering the differences between the conscious and unconscious consumers.

INSTRUCTIONS: Please perform your task in accordance with the instructions given below.

1. Decide what your wants and needs are.
2. Evaluate the list of your needs with your group members.
3. What does conscious consumer mean? Concentrate on this concept with your group members and list the characteristics that indicate conscious consumer behavior.
4. Based on the shopping process experienced individually by your group members, list the characteristics that indicate conscious consumer behavior.
5. Identify the differences between conscious and unconscious consumers.
6. Reflect all your work on your poster**.**

Assessment of the Activity

Your performance task will be assessed according to the following criteria:

- Specifying the wants and needs,
- Creating a needs list,
- Carrying out preliminary studies on the concept of conscious consumer (providing evidence for having evaluated the needs list with group members, listing the characteristics that indicate conscious consumer behaviors, and revealing individual conscious consumer behaviors),
- Identifying conscious and unconscious consumer behaviors,
- Positioning all the work done properly on the poster,
- Using Turkish in a correct, clear and understandable way in the texts,
- Observing the poster design rules, and
- Submitting the poster within the specified time.

CHECKLIST

ASSESSMENT CRITERIA	**YES**	**NO**
GROUP NUMBER:		
The wants and needs have been specified.		
A needs list has been created.		
Preliminary studies have been carried out in full.		
The differences between the conscious and unconscious consumers have been identified.		
All the work done have been properly positioned on the poster.		
Turkish was used in a correct, clear and understandable way in the texts.		
The poster has been designed properly observing the poster design rules.		
The poster has been submitted within the specified time.		

Performance Assessment

Performance assessment involves assessing key competencies, complex skills and communication needed in today's society, based on the qualitative judgments used in grading the real-life applications and tasks which are meaningful in terms of communication and teaching and students spend significant time and effort (Palm, 2008). Performance assessment includes tasks that require students to demonstrate their synthesized knowledge, understanding and skills by answering questions about a variety of learning objectives across multiple disciplines without teacher assistance (Moon, 2002). Performance assessment integrates the teaching process with the daily life of the student by associating the knowledge gained with real life through the performance tasks (Acar & Anıl, 2009). In this context, students personally apply their knowledge and skills, observe how far they have progressed, and identify the areas they need to study.

Performance assessment includes assessment tools that enable students to discover their knowledge, skills and abilities on a subject, and provides students with the option of working individually or in groups, enabling them to integrate all their knowledge and skills within the framework of the determined areas. Students who can integrate their knowledge and skills will be able to develop 21st century skills such as critical thinking, problem solving, creative thinking, reading comprehension, collaboration, and effective communication skills addressing the cognitive, affective and psychomotor areas. Accordingly, use of concrete and observable performance assessment tools in assessing the learning is essential (Marzano, Pickering & McTighe, 1993).

Within the scope of performance assessment, students are usually asked to perform complex tasks that require high-level thinking, including developing a product or suggesting solutions to a given problem, rather than simple, plain, low-level thinking tasks. In this way, it is aimed to reveal and develop students' skills such as critical thinking and problem solving, decision making, and creativity, and to determine to what extent they develop and use these skills (Kutlu et al., 2017). Performance assessment is particularly used in cases where observation and judgment represent the most valid way of assessment (Stiggins, 1987). This process helps students to continuously improve themselves and allows them to demonstrate their talents.

Assessments of the performance tasks provide information not only about the student but also about the teaching process planned by the teacher. It is also important for teachers to self-

assess. Learning outcomes allow students to integrate their knowledge and skills with real-life experience and improve their perceptions of their own learning (Ngereja, Hussein and Andersen, 2020). Performance assessments affect the relationship between student learning and the teacher's learning and teaching process. As a matter of fact, a high level of relationship was reported between satisfaction factors and students' perceived learning in the literature (Lo, 2010).

The objective of the social studies course is to develop civic competences including the knowledge necessary for students to be active and participatory in social life, the relevant intellectual processes and democratic tendencies. Civic competences are based on a commitment to democratic values and involve the ability of the individual to use the information about their own society and the world, apply inquiry processes, collect and analyze data, collaborate, make decisions and use problem-solving skills (NCSS, 1994). Assessing the students in the Social Studies course, which aims to help individuals take an active role in society, through performance tasks related to social issues will serve the purpose of the course more compared to assessing them through performance evaluations limited to exam hours.

Performance Tasks

Performance tasks are extended tasks and assignments that feature real-life problems with a view to developing and evaluating students' high-level mental skills, and require continuous research and data collection over several hours or weeks. Performance tasks include developing products such as writing compositions, writing articles, plotting graphs, and creating experimental setups, observable performances such as drawing sketches and pictures, conducting experiments, and making tools, and high-level thinking skills such as acquiring, organizing and using information. In this process, students go to the library, make observations, collect data, analyze and evaluate the data, conduct surveys, use computers and many other tools deemed necessary (Çepni, 2015; Kutlu et al., 2017; Kidd et al., 2023; MEB, 2005). Performance tasks can be limited to a specific content or designed to integrate two or more subjects such as science and social studies involving 21st century skills and thinking skills. A natural way of integrating subjects is to incorporate reading, research and communication components into tasks in content areas such as social studies, science, and health. Such tasks allow students to grasp meaningful learning in an integrated way rather than within the scope of isolated topics and chapters (McTighe, 2015). Performance tasks provide tangible products that can serve as evidence for the learning process. Given the

interdisciplinary nature of the social studies course and the diversity of the subject content, these tasks can be easily incorporated into the course to assess the related learning processes.

Two methods can be followed in writing performance tasks. In the first method, first, the higher-level mental processes to be observed are determined. Then, these processes are associated with the course content and the performance task is written. In the second method, first, the content and the learning outcomes of the course are determined, then the high-level mental processes are defined in accordance with these content and the learning outcomes and the performance task is written. Performance tasks are assessed using a scoring rubric based on the defined criteria. Since performance tasks do not lead to uniform results, students' success should be assessed on the basis of criteria determined according to the targeted learning outcomes. In addition, checklists, self-assessment, peer assessment and group assessment forms can also be used to assess performance tasks (Çepni, 2015; Kutlu et al., 2017; McTighe, 2015).

An example to a performance task activity that can be used in a social studies lesson is given below.

Performance Task and Group Assessment Example

Course Name: Social Studies
Grade Level: 5
Learning Themes: Culture and Heritage
Recommended Duration: One week
Learning Outcome and Indicators: To discover the important contributions made by the Anatolian and Mesopotamian civilizations to the history of humanity, based on the concrete remains of these civilizations.
Skills: Communication and collaboration, productivity and responsibility, information literacy
Setting: School library and home

Preparations for the Activity

Performance Task: Dear students, you are expected to write an article about Anatolian Civilizations for the culture magazine to be published this month in our school. To this end, form groups of three and choose one of the civilizations below for the subject of your article.

***Hittites *Phrygians *Ionians *Lydians *Urartians**

Instructions:
1. You are expected to submit your article in one week. Plan your time by sharing tasks with your group members.
2. Do research on the history, social life, economic activities and contributions of the Anatolian Civilization you have chosen.
3. You can use the school library for your research, and also benefit from internet sources.

4. Work with your group members to summarize the information you have obtained about the civilization you have chosen during your research in an article.
5. Highlight the important features of Anatolian Civilization you have chosen and explain its contributions to the human history.
6. Your article should be at least two pages long. You can include visuals as well as written information in your article.
7. You should specify the sources you used in your research at the end of your article.
8. You can prepare your work by handwriting or typing on a computer.

Assessment of the Activity
Duration: …. minutes

Group Assessment

First name/Last name	**:.....**
Name of the group	**:.....**
Subject of the study	**:.....**

Dear students,

Assess the work you have done with your group based on the following criteria.

Assessment Criteria	Poor 1	Average 2	Good 3	Very Good 4
Taking Responsibility Group members took on their duties to complete the study.				
Collaboration Everyone made an effort to cooperate during the study.				
Communication				

Effective communication was established between group members.				
Creativity Group members presented creative and different proposals during the study process.				
Problem Solving Group members made plans to solve the problems that arose.				
Mutual Assistance Group members helped each other to overcome difficulties encountered in completing the study.				

If you have any comments or suggestions you would like to add, please write them in the space provided below.

Project-Based Learning

Project-based learning is an approach that requires students conduct interdisciplinary research and work on real-life problems individually or in collaborative groups under the guidance of a teacher to produce realistic products and presentations. Project-based learning emerged as a result of the synthesis of John Dewey, Kilpatrick and Bruner's views on learning (Demirel, 2020; Demirhan, 2002). Projects enable students to take an active part in the learning process and manage their own learning. Additionally, projects provide opportunities for students to take on important tasks individually or in groups. Project-based learning is extremely important for the development of scientific and critical thinking, communication, and creativity skills (Bahar et al., 2015). Project-based learning is an effective method for developing 21st century skills as it promotes critical thinking and problem solving, interpersonal communication, information and media literacy skills (Chu et al., 2017, as cited in Maros et al., 2021). Students use digital tools and other sources while preparing their projects. Thus, projects provide students an opportunity to develop their digital literacy skills.

Project-based learning (Öztürk & Ada, 2006):

- allow students to combine real-life products and performances,
- give students the opportunity to apply the knowledge and skills they have gained through the project,
- enables life-long learning,
- enables group participation in collaborative learning activities, and
- provides students with skills such as decision making, critical thinking, problem solving, using technology, and self-control.

Project-based learning emphasizes the process dimension of learning, not the product dimension, and individualizes learning. The teacher acts as a helper and guide while students work on an interdisciplinary problem or scenario (Özerbaş & Somuncuoğlu Özerbaş, 2016). Students have the opportunity to apply what has been learned while completing a project and explore their creativity by trying new ideas. The main focus of project-based learning is to enable students to apply the knowledge and skills they need to solve real-world problems.

Bozkurt (2016) explained the components of the project-based learning approach as follows:

Content: Content is presented in relation to real life and the student works with this content to solve the problem. Integrity of the content and in-depth research are both important.

Activities: Students do research to find solutions to the problem and the answers they seek. Within the scope of the activities, students apply what they have learned to problems they may encounter in real life.

Process: The process not only encourages students to work collaboratively with each other, but also supports their individual work. The use of technological tools is prominent in the process, and students are encouraged to use these tools.

Outcome: The outcomes help students develop higher order thinking skills and problem solving strategies. At the end of the learning process, students create complex, intellectual and logical products that they substantiate with examples and evaluate these products. In this process, they have the opportunity to demonstrate their life skills, social skills and self-management skills.

The basis of the project method is learning through research and inquiry. For this reason, the student should, first of all, master the scientific research method. During the preliminary preparation process, students should be trained on how to state the problem they would like

to research, how to collect data, how to carry out field trips, observations, interviews, experiments, etc., how to present the collected data and how to report the research (Doğanay & Tok, 2021). Project-based learning is process-based and involves assessing students' products, developmental processes and performances. The most important component of the assessment is not only the evaluation of the product developed as a result of the activities, but also the process of developing this product. In this context, the assessment of project-based learning involves the evaluation of both product and process. Considering that the project assessment approach is process-based, alternative assessment tools such as rubrics, checklists, peer assessment, and self-assessment should be used. Projects require scoring standards and detailed instructions (Demirel, 2020; MEB, 2005; Ulukaya Öteleş, 2019).

An example of a project assignment and assessment method related to an learning outcome of the social studies course is given below.

Course Name: Social Studies
Grade Level: 6
Learning Themes: Production, Distribution and Consumption
Learning Outcome and Indicators: To analyze the effects of unconscious consumption of resources on the lives of living things (SS. 6.5.2).
Skills: Environmental literacy, critical thinking and problem solving, communication and collaboration
Recommended Duration: Three weeks

Application Example (Project Instructions)

Dear students,

The unconscious consumption or misuse of natural resources causes the deterioration of the balance of ecosystems, reduction of biodiversity, environmental pollution, climate change and environmental disasters. It would be best for all living things to think and act on these problems.

Implementation of the Activity
Three Weeks

All details and instructions regarding the project you will prepare on the effect of unconscious consumption of resources on the lives of living things are given below.

1. Form groups of three for your project assignment.

2. Classify natural resources and list the natural resources you use in your daily life, e.g., water, energy, food, clothing, etc.

3. Conduct a research on the effects of unconscious consumption of resources.

4. Prepare a report consisting of the causes and consequences of unconscious resource consumption and solutions and suggestions that will ensure the conscious use of resources.

5. Prepare a presentation of your report using visual materials. Determine the visual materials you will use in your presentation together with your study group. You can make your presentation in creative drama, poster, brochure or exhibition format.

6. Define a motto for your project. This presentation will raise awareness among your friends and society on how to use resources consciously.

Assessment of the Activity

Assessment Criteria	**Success Level**					**Achievement Score**
	0	**1**	**2**	**3**	**4**	
Classification of sources	The sources used have not been listed, and no classification has been made.	The sources used have been listed incompletely, no classification has been made.	The sources used have been listed incompletely, and partially classified.	The sources used have been completely listed and partially classified.	The sources used have been listed and classified completely.	
Drafting a report	No report has been written.	The effects of unconscious consumption of resources have been completely misinterpreted.	The effects of unconscious consumption of resources have been misinterpreted.	The effects of unconscious consumption of resources have been partially incompletely interpreted.	The effects of unconscious consumption of resources have been interpreted accurately and completely.	

Discussing the causes and consequences of unconscious use of resources	No report has been written.	The causes and consequences of unconscious use of resources are completely absent from the report and have not been discussed from a critical point of view.	The causes of unconscious use of resources have been incompletely stated in the report, and the consequences of unconscious use of resources have not been discussed from a critical point of view.	The causes and consequences of unconscious use of resources have been discussed in the report partly incompletely and partly from a critical point of view.	The causes and consequences of unconscious use of resources have been completely and critically discussed in the report.	
Presenting solution proposals	No solution has been proposed.	Solution proposals for the conscious use of resources have not been addressed or they were inappropriate and insufficient.	Solution proposals for the conscious use of resources have been addressed, and they were partially appropriate, but not sufficient.	Solution proposals for the conscious use of resources have been addressed, and they were appropriate and partially sufficient.	Solution proposals for the conscious use of resources have been addressed, and they were both appropriate and sufficient.	
Use of visual materials	Visual materials have not been used.	Visual materials used were inappropriate and	Visual materials used were partially appropriate	Visual materials used were appropriate and	Visual materials used were both appropriat	

		insufficient .	, but not sufficient.	partially sufficient.	e and sufficient.	
Creation of a motto	No motto has been created.	The motto is not compatible with the content.	The motto is partially appropriate to the content, but not attention-grabbing.	The motto is appropriat e to the content, but not attention-grabbing.	The motto is appropriat e to the content, and attention-grabbing.	

Portfolio Assessment

A portfolio is a collection of student work scored according to some predetermined criteria. It is one of the popular methods as a way of assessing 21st century skills (Soland et al., 2013). As a word of Latin origin, the word portfolio means the place where artists compile and collect their visual works, structure them in line with their interests and talents, and exhibit all their works. Portfolio has become a concept that is also used in other fields today. Although portfolio in education is used in a similar sense to its original meaning, it is a much more comprehensive term. For this reason, it should not be seen as a single file where all documents are piled up. Portfolio is an important tool used in education to assess students individually (Kutlu et al., 2017). Portfolio assessment may also be considered an authentic assessment, which includes studies that enable students' active participation and a series of tasks that holistically reveals the development of students' skills and achievements. These studies include assignments made by students, project reports, reports of collaborative studies, evaluation papers, photographs, pictures, etc.

Portfolios enable students to keep track of their individual learning needs and level of learning. In this way, they can take control of their own learning. Portfolios create a roadmap for students' retrospective ('What did I do?', 'What did I learn?', etc.) and prospective ('What do I need to learn?') learning experiences (Davis & Ponnamperuma, 2005). Portfolios allow students to take responsibility for their learning and analyze their strengths and weaknesses. Therefore, as a learning tool that can provide feedback on students' academic performance, portfolios have been increasingly used as an assessment tool in recent years. Portfolio assessment includes self-assessment and reviewing and revising the portfolio content (Tangdhanakanonda & Wongwanichb, 2015). Portfolio assessment allows teachers to easily

monitor their students individually and provides important feedback that they can use in structuring the learning and teaching process. It is aimed to highlight the skills of students such as critical thinking, creative thinking, self-regulated learning, self-confidence and self-learning with portfolio evaluation, which involves the collection, selection, reflection, revision, and evaluation of the portfolio content and the effective use of these evaluation results (Tangdhanakanonda & Wongwanichb, 2015).

Teachers target the teaching, student learning and assessment and evaluation processes with portfolio assessment. First, it is important to determine the purpose of using the portfolio tool, and the type of portfolio to be used in line with the determined purpose. In addition, feedback should be provided to teachers, students and parents through the use of assessment tools such as rubrics and self-assessment forms as part of the portfolio assessment process (Kutlu et al., 2017).

An example of a portfolio application related to a social studies course learning outcome is given below, along with the relevant instructions and assessment method.

Application Example (Portfolio)

Course name: Social Studies

Grade level: 4

Learning Themes: Science, Technology and Society

Recommended Duration: Four weeks

Learning Outcome and Indicators: To research the inventors of the technological products that he/she uses and the evolution of these products over time (SS.4.4.3.).

Skills: Critical thinking, productivity and responsibility, creative thinking, problem solving, communication, collaboration.

Materials: Videos, audio recordings, visuals, newspapers, magazines, etc.

Content

Instructions: Prepare your portfolio in accordance with the instructions given below.

1. Include information about technological products in different fields from the past to the present and the purpose of use of these products in your portfolio.

2. Prepare a poster with brief information about the inventors of the inventions in different fields.

3. Enrich the information for each invention with visuals by integrating the information you have obtained from sources such as magazines/newspapers/bulletins with a focus on the changes in inventions in different fields over time. Add your comments.

4. Include your answer to the question "What kind of tool/product would you develop if you were an inventor?" considering today's conditions, together with the purpose of use of the product you intend to develop and the areas in which it will be used in your report.

5. Conduct an interview on the positive and negative reflections of the technological products that are widely used today on people. Conclude your portfolio by adding the information you have obtained as well as your own comments.

NOTE: Do not forget to add all the activities you have carried out within the scope of the related homework during your homework process to your portfolio.

Self-Assessment Form

Dear students,

Below are the assessment criteria to be used to assess the portfolio that you have prepared. Please indicate your own assessments based on these criteria by putting an X mark in the relevant box.

Student's First Name/Last Name

Assessment Criteria	I strongly disagree				I strongly agree
	1	2	3	4	5
I have extensively researched the					

technological products from the past to the present in different fields and their purposes of use.					
I have adequately researched the evolution of inventions in different fields over time.					
I had a hard time researching inventions in different fields.					
The reason why I had a hard time:					
I reflected enough information about the inventors of inventions in different fields on the poster in an interesting way.					
I enjoyed preparing the poster.					
I researched and interpreted the visuals of the changes that occurred over time in inventions in different fields from the past to the present.					
I had a hard time interpreting the					

changes of inventions over time.					
The reason why I had a hard time:					
I enjoyed preparing my report, which includes the type of tool I would like to develop if I were an inventor, its purpose and area of use.					
I effectively interpreted the positive reflections of the technological tools that are widely used today on people, together with the data I obtained from the interview.					
I enjoyed conducting the interview.					

This study has contributed to me in the following ways:

……
……
……

The weaknesses of my portfolio in my opinion are as follows:

……
……

Scoring Rubrics

Student-centered education primarily aims to ensure the active participation of students in the learning environment and learning process, in order to enable them to access information in a short time and to process every information they reach in accordance with their own purposes. In this context, the positive reflections of new performance assessment tools that have become popular in the teaching process on learning are noteworthy. Among these tools, scoring rubric is the most widely used performance assessment tool that provides reliable results on student performance. Scoring rubrics minimize the reliability problems arising from the scoring process (Parlak & Doğan, 2014).

Scoring rubrics, which enable the performance to be assessed accurately, is an important assessment tool that can be used in evaluating students' projects, portfolios and performance tasks. This assessment tool allows comprehensive assessment of students according to the criteria set by the teacher within the framework of the outline of the task assigned to the students.

It is essential that the criteria to be used in assessing whether the task or tasks performed by the students are successful within the scope of the scoring rubrics are defined comprehensively. In addition to providing feedback to students individually, scoring rubrics also assist teachers in planning the instruction process (Reddy, 2007). Scoring rubric, as an effective assessment tool, facilitates the teaching process by improving the performance of students and determining the limits of teachers' expectations from students and also provides direct feedback to students about their strengths as well as their weaknesses need to be improved (Andrade, 1997).

There are two types of scoring rubrics, i.e., holistic and analytical rubrics, which describe the performance of students based on a certain number of well-defined categories. With holistic rubrics, teachers score the overall process or product as a whole, without considering its components. Therefore, in assessments made using holistic rubrics, mistakes in some components can be ignored if the performance shown for the whole process or product is high. On the other hand, with analytical rubrics, teachers score student performance on each task or question separately. These scores are then summed to find the overall score for the process or product. Therefore, analytical rubrics allow to identify student strengths or weaknesses in each component of the process or product (Bahar, 2015; Güler, 2019). The findings of a study on

the use and effectiveness of scoring rubrics in the Social Studies course indicated that rubrics are effective assessment tools for the Social Studies course (Tuncel, 2013)

An example of the use of the rubric in the assessment of a performance task related to the learning outcome of a social studies course is given below.

Scoring Rubric Application Example

Course Name: Social Studies
Grade Level: 6
Learning Themes: People, Places and Environments
Recommended Duration: Three weeks
Learning Outcome and Indicators: To make inferences about climate characteristics based on human experiences in different natural environments of the world
Skills: Productivity and responsibility, problem solving, communication and collaboration
Materials, if any:
Setting:

Preparations for the Activity

Group Performance Task: Dear students, you are expected to conduct a group study on the lives of people living in different climatic conditions in the world and the effects of these conditions on human life. Write a report describing the relationship between the climate characteristics of the country and region you have chosen and the lifestyles of people living therein.

Instructions: Prepare your group performance assignment in accordance with the instructions given below.

1. Form groups of four to prepare the group performance assignment.
2. Research the lifestyles of people living in polar, desert, monsoon and equatorial climates.
3. You can benefit from internet resources, books and magazines and use the school library for your study.
4. First, watch videos or documentaries about the lives of people living in different climatic zones.
5. Interpret the information you have obtained from your literature research and the documentaries you have watched and put into report form.
6. The research report should be at least eight pages.
7. It is important that you also use maps and visual materials in the report.
8. You must submit your work within three weeks at the latest.
9. You can choose the method you will use in the presentation of your study, such as a powerpoint presentation or an exhibition of photographs and visual materials.

Assessment of the Activity

Example 1. Holistic Rubric

Dear students, prepare your study on the lives of people living in different climatic conditions in the world and the effects of these conditions on human life, taking into account the scoring rubric is given below.

Student's First Name/Last Name:

……
……
…….

Assessment Criteria
Score

4 points

The subject was *fully* covered in the study report.

The study report was supported with sufficient visual materials.

The information obtained from sources was interpreted in the study report.

The study report was prepared by using at least four sources.

3 points

The subject has been covered *extensively* in the study report.

The study report was supported with very little visual material.

The information obtained from the sources was not adequately interpreted in the study report.

The study report was prepared by using at least three sources.

2 points

The study report provides *very little* information on the subject.

Visual material supporting the subject was hardly used in the study report.

The information obtained from the sources was not interpreted in the study report.

The study report was prepared by using at least two sources.

1 point

The study report does not provide any information.

Visual material supporting the subject was not used in the study report.

The information obtained from the sources was directly included in the study report without any interpretation.

The study report was prepared by using only one source.

Example 2. Analytic Rubric

Student's First Name/Last Name:
……
……
…….

Assessment Criteria	Success Level				Achievement Score
	1	2	3	4	
Scope of the subject content	The content of the subject is very superficial and was insufficiently covered; the research problem was not described.	The subject content is not superficial but was insufficiently covered; the research problem was poorly described.	The content of the subject was extensively, albeit not fully, covered; the research problem was partially well described.	The content of the subject was fully covered; the research problem was well described.	
Use of visual materials	Most of the visual materials used are neither appropriate nor sufficient in any subject area, and insufficiently support or do not support the report at all.	The visual materials used are appropriate, yet not sufficient in all subject areas, and support the report only very little.	The visual materials used are appropriate and sufficient for each subject area, and partially support the report.	The visual materials used are appropriate and sufficient for each subject area, and fully support the report.	

Use of sources	Only one or two sources were used in the report.	At least three sources have been used in the report, and the information obtained from these sources was directly included in the study report without any interpretation.	At least three sources were used in the report, and the information obtained from these sources was interpreted incompletely.	At least three sources were used in the report, and the information obtained from these sources was fully interpreted.	
Making a Presentation	The presentation of the report was not clear and there was no sign that the presentation was prepared collaboratively.	The presentation of the report was somewhat clear, and there were a few signs that the presentation was prepared collaboratively.	The presentation of the report was clear in general and partly received attention, and there were a few signs that the presentation was prepared collaboratively.	The presentation of the report was clear and received full attention, and there were many signs that the presentation was prepared collaboratively	

Self-Assessment

Self-assessment is an approach that helps individuals discover their own abilities. It helps students to recognize their own strengths and weaknesses and gives them the opportunity to increase their motivation. The cornerstone of metacognition processes is that students take responsibility and control of their own learning by identifying their strengths and weaknesses, and make inferences by reflecting on their own thoughts and learning. Accordingly, self-assessment involves the control of thinking and evaluation skills of individuals towards

cognitive activity processes (Demirel, 2017; Flavell, 1976; Kutlu et al., 2017). Self-assessment encourages students to critically evaluate themselves and take responsibility for their learning process, enabling them to critically examine their own performance and take appropriate steps to improve their future performance.

Ross (2006) stated that self-assessment carried out by students takes place in three stages. First, students produce their own observations by deliberately focusing on certain aspects of their performance based on their subjective standards of achievement. Secondly, students carry out self-assessments in which they determine how well they have achieved their general and specific goals. Thirdly, students make self-reactions that express their targeted achievements and how satisfied they are with the result of their actions. Self-assessment focuses student attention on specific aspects of performance, e.g., co-created rubric dimensions, redefine the standards students use to determine achievement, and structures teacher feedback in such a way as to reinforce positive responses that provide accurate recognition of successful performance.

Self-assessment is seen as a necessary skill for lifelong learning. Students who take responsibility for their own learning through self-assessment also develop their self-regulated learning skills. Self-assessment ensures that the evaluation dimension, which is included in the basic dimension of the learning process, is understood by the student and that the determined assessment criteria allow deeper learning (Boud, 1990; Ndoye, 2017). Self-assessment may lead to misconceptions at first due to students' inexperience. Some students may be overly critical and sensitive. However, as students gain more experience under the guidance of teachers, the decisions they make will be more accurate (Bahar et al., 2015).

Self-assessment skills are very important for students to become effective in learning to learn, which is a vital skill (Logan, 2009). Improvement of students' skills on learning to learn is especially important considering that it has become very difficult pedagogically for teachers to determine how to conduct the teaching process. Overcoming this difficulty by guiding learners to take responsibility for their learning will render the learning and teaching process more interactive, turning this process it into a positive atmosphere. From this point of view, 21st century learners' acquisition and development of vital skills that are important for the 21st century using formative assessment, self-assessment and peer assessment will enable them to adapt to changing life conditions and become self-confident and motivated adults.

An application example of the Self-Assessment Form was given in the portfolio assessment subsection included under the portfolio section.

Peer Assessment

Due to its learning-oriented and formative nature, peer assessment is often used as one of the applications of classroom-based assessment (Yin, Chen & Chang, 2022). The purpose of formative peer assessment is "to help students plan their learning, identify their strengths and weaknesses, determine target areas where corrective actions are needed, and develop metacognitive and other personal and professional skills (Topping, 2009). In recent years, formative assessment has become an assessment approach that is deemed necessary given that it focuses on the learning process, structures the learning process by placing more emphasis on the feedback process compared to the grading process, and prepares students for lifelong learning as self-assessors with the emphasis it places on self-assessment and peer assessment methods.

Students who are the subjects of assessment should be aware of how they learn as lifelong learners and how they will assess what they have learned. Students' assessment of their own work within the framework of certain criteria, teachers' trust in their students' success, students' confidence in their own capacities as learners, students' assessment based on learning, not just performance, students' interpretation of grades and feedback separately, students' use of self-assessments and peer assessments are all evidences of a reform in the assessment dimension (cited by Boud & Falchikov, 2006, p. 407). Peer assessment has also been referred to as a strategy involving students' judgments about the work of others, which often arises when students work together on joint projects and learning activities (Noonan & Duncan, 2005; Tünkler, 2019). Peer assessment helps individuals in matching age groups evaluate their strengths and weaknesses objectively based on performance. Peer assessment contributes to the emotional and social development of students and supports their communication skills and reflective and critical thinking skills.

Peer assessments are often used to assess learning products such as oral presentations, written work, portfolios, drawings, etc. However, peer assessments may also be used to assess learning behavior or wide social behavior, sometimes encompasses both academic products and associated behaviors. Therefore, peer assessment can consider not only the learning product but also the learning process by taking into account the process behaviors that lead to

learning. It is important for students to be clear about the form and nature of peer assessment. Students conducting a peer assessment should be informed about giving positive, negative and neutral feedbacks, keeping a balance between these feedbacks. It is also important that the student receiving feedback is prepared to respond thoughtfully, decide what points to accept and what not to accept, and use this information to improve current or future work. Peer assessment is usually reciprocal, that is, participants of the peer assessment process can be both assessors and assesses (Topping, 2017).

Peer Assessment Form

First name/Last name of my friend who prepared this study:

The title of the study I assessed:

The date I assessed the study:

The strengths of this study are as follows:

.....
.....
.....

The weaknesses of this study that need improvement are as follows:

.....
.....

Group Assessment

Collaborative learning is a learning and teaching technique based on working together in small groups of students with the aim of achieving the goals at the highest level. Collaborative learning involves a group of students working together in cooperation. In this context, group assessment involves group members' assessment of both themselves and other members within the scope of group work. In this way, students get to know each other's thoughts on the subject they are studying, and thus their communication skills are also improved. Checklists, scoring rubrics, open-ended questions are widely used tools in this type of assessment. Group

assessment offers students the opportunity to assess their own contributions as well as the contributions of their friends within the group (Alıcı, 2020; Bahar et al., 2015; Kutlu et al. 2017).

The group assessment process can be more difficult than other assessment processes, considering that students need to demonstrate their individual skills in the group as well as fulfill the tasks assigned to them as the members of the group. Group performances need to be assessed by the group members. In this way, the active participation of group members in the assessment process is ensured.

It is recommended to use assessment tools such as open-ended questions and scorings rubrics in particular in self, peer and group assessments, which constitute the basic building blocks of performance-oriented assessments.

An application example of the Group Assessment Form was given in the *performance task* section.

Conclusion

21st century skills are essential skills for individuals in overcoming the problems they encounter in their daily lives and succeeding in their education and business lives. Learning and developing these skills affect the future success of individuals. Teaching 21st century skills is very important in social studies teaching as in every field. The social studies course, which aims to provide students with basic knowledge, skills and values in the field of social sciences, also helps students develop a more sensitive and conscious perspective towards the structure and functioning of society and social events. 21st century skills, which are defined as the knowledge and skills that students need to be successful in business, life and citizenship (P21 Skills, 2019), offer opportunities for both individual and societal development. On the other hand, the skills aimed to be acquired in the social studies curriculum are related to 21st century skills. In this context, social studies course can be used can be used to provide students with 21st century skills.

21st century skills help individuals develop the skills necessary to look at today's world problems and social events from different perspectives and produce new solutions. Individuals who develop these skills keep up with the changes brought by the age we live in and do not lag behind the information age. For this reason, it is of great importance to provide students with 21st century skills with effective teaching approaches and to monitor the development of

students in this process. Traditional assessment and evaluation methods may not be sufficient in assessing 21st century skills. Students' 21st century skills should be assessed in terms of not only academic performance, but also real-world experiences, projects, performance tasks, portfolios, and group works.

Alternative assessment tools to be used in the assessment of 21st century skills should evaluate knowledge, skills and abilities together. It is also very important that the skills aimed to be acquired by the social studies curriculum and 21st century skills are acquired within the scope of permanent learning by using complex learning objectives. In this way, students' meaningful learning can be supported. Teachers' setting the criteria for teaching objectives in the Social Studies course within the framework of 21st century skills and allowing their students to be evaluated in a product and process-oriented manner based on these criteria as well as providing students with feedback on their learning process will greatly contribute to the students' ability to follow and organize their own work and to look critically at their own work. In conclusion, it is of great importance to assess the 21st century skills with innovative assessment methods in order to identify the strengths and weaknesses of the students with a view to preparing students for the future in the best way possible through education.

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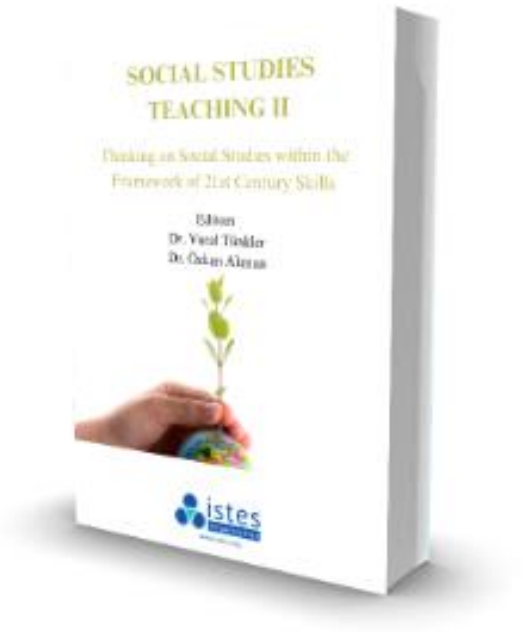

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