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An Examination of 2018 Life Study Lesson Curriculum in Terms of 21st Century Learning and Innovation Skills *

Mustafa BEKTAŞ**

Fatih Selim SELLUM***

Derya POLAT****

Abstract. Students who will be educated by using 2018 Life Study Lesson Curriculum (LSLC) will be the generations of 21st century. In this study, 2018 LSLC was examined in terms of 21st century learning and innovation skills (communication, collaboration, critical thinking and creativity). In the study, document review, one of the qualitative research methods, was used and the data were analyzed by descriptive analysis. During the document review, access to the documents, checking the originality, understanding the documents and analyzing the data were carried out. The curriculum is examined in three sections because the section of the curriculum in which the skill is involved contributes to the acquisition of skills at different levels. As a conclusion of the research it is stated that the communication and collaboration skills are sufficiently while the expressions of critical thinking and creative thinking skills were found to be limited in the 2018 LSLC. To contribute to the literature, 2018 LSLC can be examined in terms of more skills. Skills included in the curriculum can be graded as introducing, developing and reinforcing by determining the level of the grade so that the student's skill development process can be followed.

Keywords: Life study lesson curriculum, 21st century skills, learning and innovation skills.

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** Orcid ID: <https://orcid.org/0000-0003-2992-1965>, Assoc. Prof., Sakarya University, Faculty of Education, Department of Basic Education, mbektas@sakarya.edu.tr

*** Orcid ID: <https://orcid.org/0000-0002-4445-0324>, Res. Assist., Sakarya University, Faculty of Education, Department of Basic Education, fatihsellum@sakarya.edu.tr

**** Orcid ID: <https://orcid.org/0000-0002-8345-6956>, Master Student, Sakarya University, Institute of Educational Sciences, Basic Education Department, derya.polat2@ogr.sakarya.edu.tr

1. INTRODUCTION

In the 21st century, knowledge accumulates rapidly. Due to this rapid increase, it becomes difficult and complicated to learn the current information. Moreover, in today's conditions, storing information to minds alone is insufficient to cope with problems in life. Nowadays, the people who can solve the real-world problems by filtering the current information through their thinking processes come to the forefront. When it is thought that access to information becomes effortless, it is seen that gaining skills has more importance than getting information in reference to before. However, the skills of the information age also differ from the earlier ages.

21st century skills are skills and competences that individuals need to acquire in the information society (Anagün, Atalay, Kılıç & Yaşar, 2016). Today, when knowledge continues to increase rapidly, it is stated that 21st century skills include the skills and competencies required for lifelong learning (Karakaş, 2015). Learning has evolved from the memorization of knowledge to the acquisition of skills and has become a necessity of lifelong learning from being a part of life. It is thought that as the skills that are being the fields in which involve the problems we encounter frequently in our lives such as the literacy of economics, law, media and politics the other 21st century skills will transform into the literacy as well. In the process of transformation, such skills as creativity, critical thinking, problem solving, and collaboration, which have been needed only for a small part of societal life, will be a universal literacy in 21st century and will have a crucial place according to Akgündüz et al. (2015). It will be easier for people with these literacies to adapt to their life and to find solutions to the problems they encounter. Ekici, Abide, Canpolat and Ozturk (2017) stated that due to the increasing knowledge, the scope of literacy has expanded, the basic information and skills are considered as cornerstone for the literacies and the literacies are considered as cornerstones for competencies. In an extremely rapidly changing world, many countries need to adapt to the global world (Bernal, 2014). The trend towards 21st century skills has been increasing in recent years. Countries conduct researches on which are these skills, which will come to the forefront in the future and how these skills can be gained. In this context, many people and institutions defined 21st century skills and various classifications were made. The Ministry of National Education (MNE) is one of the institutions that make this classification.

In its report titled 21st Century Student Profile, which was published in 2011, the Ministry defined seventeen skills (communication skills, collaboration, creativity, problem solving, critical thinking, information literacy, information communication technology literacy, innovative thinking, consciousness and skills related to life and career, personal and social responsibility, metacognitive skills, using learning strategies, learning to learn, local and universal citizenship awareness, decision making, using Turkish correctly, using a foreign language at basic level) as 21st century skills in the titles of ways of thinking, ways of working, working tools, and integration to the world (MNE, 2011). This classification shows similarity with the classification of Assessment

and Teaching of 21st Century Skills (ATC 21S) which classifies 21st century skills as ways of thinking, ways of working, tools for working and living in the world (Griffin & Careile, 2011).

In the literature, there are different classifications for 21st century skills. Partnership for 21st Century Learning (P21, 2018), Organization for Economic Cooperation and Development (OECD, 2005), World Economic Forum (WEF, 2015) and Lemke, Coughlin, Thadani & Martin (2003) are some of the people and institutions that listed the 21st century skills. Although all classifications are different from each other, some of the skills they include are mutual in classifications. The list of skills included in the classification of at least three different persons or institutions is given in Table 1 (MNE, 2011; P21, 2018; OECD, 2005; ATC21S, 2014; enGauge, 2003 and WEF, 2015).

Table 1.

The Most Common Skills in 21st Century Skill Classifications

SKILLS	MNE	P21	OECD	ATC21S	enGauge*	WEF
Communication Skills	✓	✓	✓	✓	✓	✓
Collaboration	✓	✓	✓	✓	✓	✓
Creativity	✓	✓		✓	✓	✓
Problem solving	✓	✓	✓	✓		✓
Critical thinking	✓	✓		✓		✓
Information literacy	✓	✓		✓	✓	
Information communication technology literacy	✓			✓	✓	✓
Innovative thinking	✓	✓		✓		
Personal and social responsibility	✓			✓	✓	
Adaptation		✓			✓	✓
Productivity (Creating personal projects)		✓	✓		✓	
Financial literacy		✓			✓	✓

* Lemke, Coughlin, Thadani and Martin (2003) have made classification under the name "enGauge 21st century skills" and so it is expressed as enGauge.

In Table 1, communication and collaboration skills are defined in all six lists where various individuals and institutions classify 21st century skills; creativity and problem solving skills in 5 different lists; critical thinking, information literacy and information communication technology literacy skills in 4 different lists; innovative thinking, personal and social responsibility, adaptation, productivity (creating personal projects) and finance literacy skills are in three different lists. Ekici et al. (2017) examined the nineteen data sources for 21st century skills and reached a total of 63 skills and ranked as the five most frequently repeated skills as communication, collaboration, creativity, critical thinking and problem-solving skills that correspond to Table 1.

The P21 project, supported by 33 institutions in the United States (USA) and implemented by 21 states, is an important example of gaining 21st century skills. The skills determined by this partnership are widely accepted in the USA and the world (Gelen, 2017). According to P21, which divides 21st century skills into three groups as "learning and innovation skills", "information, media and technology skills", and "life and career skills"; learning and innovation skills include creativity, critical thinking, communication and collaboration skills and these skills are expressed as 4C skills according to their initials (P21 Leadership States, 2018). These four skills are included in the WEF classification under Competencies heading (WEF, 2015), and coincide with the most repetitive skills presented in Table 1. These skills have been studied by many people and institutions and are tended to be a fundament of education in solving the complex problems of the 21st century man by being addressed in a universal dimension. While it was important to keep information ready in the memory for use in the past, the tools and equipment that provide fast access to information in many environments make the acquisition of skills such as 4C skills that will allow the use of this information more important.

With the taking place of artificial intelligence and robots in daily life, one of the factors that can make a difference between people and machines may be learning and innovation skills. Therefore, it is important to educate individuals who can think creatively and critically, who have high communication skills and who can work collaboratively. According to Anagün, Atalay, Kılıç, and Yaşar (2015), students are prepared for complicated social and economic life by learning and innovation skills. It is even more important to acquire learning and innovation skills for today's students who must deal with more complex problems in the 21st century.

Educational institutions are one of the institutions that are undergoing significant changes (Durukan, 2015; Kotluk & Kocakaya, 2015) by the replacement of 20th century concepts such as value creation with knowledge, knowledge economy, knowledge as capital, and managing knowledge with the 21st century concepts such as communication mobility, rapid increase and diversity of knowledge (Durukan, 2015). The curricula in Turkey was revised in 2018 to respond to the needs and to follow the developments. The perspective of the published curricula is stated as educating individuals with knowledge, skills and behaviors integrated with values and competences in line with the

objectives of the Turkish Education System (MNE, 2018). Key competences determined by the Professional Qualifications Institution (2015) for lifelong learning are communication in mother tongue, communication in foreign languages, basic skills in math and science, digital literacy, learning to learn, social and civic responsibility, taking initiative and entrepreneurship and, cultural awareness and creativity and they are common in all curricula published in 2018. In addition, it is noteworthy that some skills are included in the curriculum specific to the course. It can be said that the integration of competencies in all curricula published in 2018 and including specific skills for some courses is a reflection of transition from behavioral approach to constructivist approach in Turkish Education System in 2005 and nowadays the skills are highlighted. Along with having common competencies and values of all courses in the 2018 primary school curriculum, specified skills are included for the courses of Physical Education and Play, Science, Visual Arts, Life Study, Music and Social Studies.

One of the courses that include course-specific skills in the curriculum published in 2018 is the life study course. The life study course is a course that aims to provide students with a better understanding of themselves and social life, adaptation to this life (Bektas and Uzunkol, 2015) and providing opportunities for students to participate in formal learning environments after the family environment and to connect what they have learned up till that time with real-life environments (Bektaş, 2013). Life study is also the first course that helps the individual to find solutions to the problems that will be encountered, and to prepare them for further education and ultimately life (Akınoğlu, 2002). It is important for individuals to acquire 21st century skills, which are essential skills for individuals to adapt to school and business life and to be successful, in the early ages to be well educated individuals (Bozkurt & Çakır, 2016). At the same time, it will be expected from individuals to know the professions of the future and the skills related to them in the 21st century (Çepni & Ormancı, 2018). For these reasons, today in which students will be raised who will constitute the generation of the 21st century, it is important that 21st century skills should be included in the curriculum of the course adequately and with the right proportions.

Although a skill is not directly involved in a curriculum, some sub-expressions are capable of meeting that skill. Examining all skills in a curriculum together with sub-expressions requires a far more comprehensive and long-term study. Examining a skill only in its own expression is a superficial study and may not lead to a correct conclusion. To obtain more meaningful results, sub-expressions of those skills too should be examined in the curriculum. For these reasons, there was a need for a restriction. The aim of this study is to examine the four skill expressions, called 4C: Learning and Innovation Skills, directly and indirectly (together with sub-expressions) in the 2018 LSLC. In accordance with this purpose answer to following question has been sought.

- How much of the direct and indirect expressions of learning and innovation skills are taken place in 2018 LSLC?

2. METHOD

Research Model

In this study, which aimed to examine the 2018 LSLC in terms of 21st century learning and innovation skills, document review, one of the qualitative research methods, is used. Document review, which can be used as a stand-alone research method, includes analysis of written materials containing information about the phenomena or events that are aimed to be investigated (Yıldırım & Şimşek, 2016). During the document review, access to the documents, checking the originality, understanding the documents and analyzing the data stages were utilized.

Data Collection Tool and Data Collection

In the study, primary sources have been reached to determine 21st century skills in digital environment (MNE, 2011; Partnership for 21st Century Learning, 2018; enGauge, 2003; Griffin & Careile, 2014; OECD, 2005; World Economic Forum, 2015). After reaching these sources, a list of 21st century skills, which is the most common in the classifications presented in Table 1, has been formed. 2018 LSLC has been accessed from the Education Board of the Ministry of National Education (MNE, 2018). During the determination of sub-expressions of learning and innovation skills, the literature review was done. As a result of the literature review, some sub-expressions have been reached in 2009 Life Study Course Curriculum for critical thinking, creative thinking and communication skills (MNE, 2009). Based on the sub-expressions in the curriculum, sub-expressions that can meet each skill are formed by the researchers as a draft. For the skill of collaboration, sub-expressions have been formed as a draft by using some studies in the literature (Çubukçu, 2011; Bektaş & Horzum, 2014). To ensure the validity of these statements sub-expressions, which are formed as draft, are presented to a primary school teaching, an education program development, and a Turkish field expert. After feedbacks from field experts, sub-expressions were clarified and sub-expressions capable of meeting these four skills were finalized. These sub-expressions that are capable of indirectly meeting learning and innovation skills are stated in Appendix 1.

Data Analysis

In this study, the data were analyzed by descriptive analysis. The data obtained by descriptive analysis are summarized and interpreted according to predetermined themes. The analysis process consists of creating a framework, processing the data according to the thematic framework, defining the findings and interpreting the findings (Yıldırım & Şimşek, 2016). One of the ways to ensure reliability in qualitative research is the detailed description of the stages of the research and the path followed (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz & Demirel, 2017) and so the data analysis process is presented in detail.

In order to make the review more meaningful, the 2018 LSLC is divided into three sections. Section 1 is common for all courses and called as “About Primary School Curricula”; section 2 is special for life study lesson and covers all the grades and so called as “About Life Study Lesson Curriculum”; the third part is called “Life Study Lesson Learning Outcomes and Explanations according to Grades” which includes learning outcomes and explanations according to grades. The titles of each section are presented in Figure 1 (MNE, 2018).

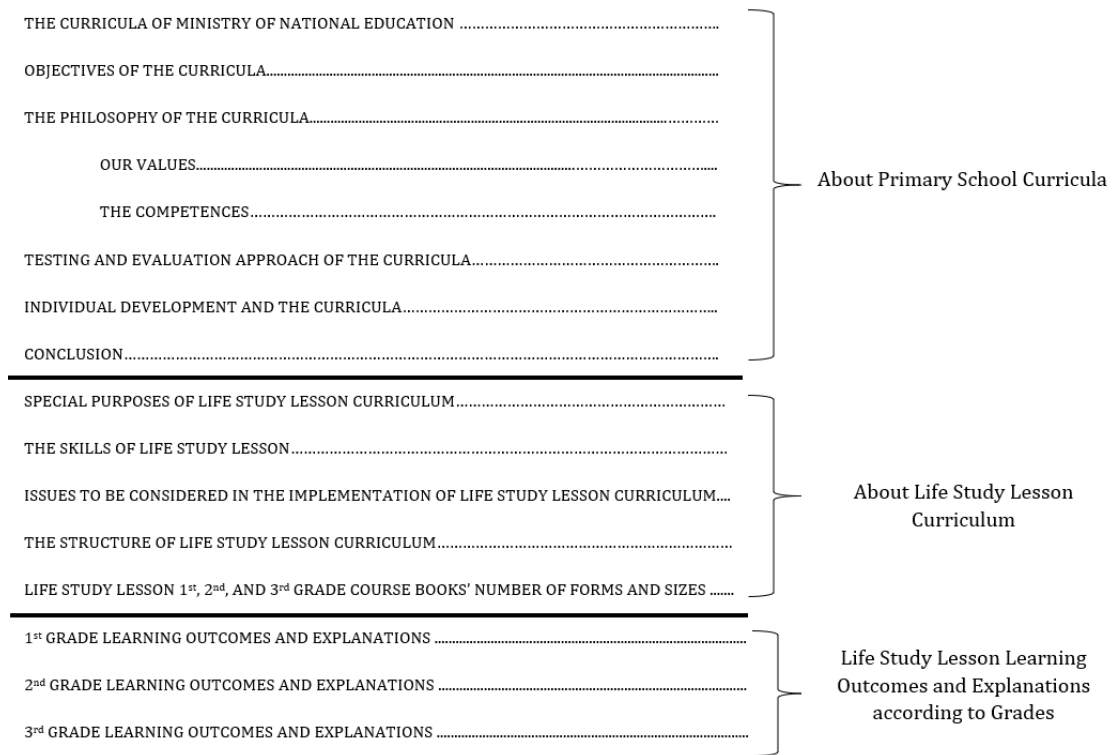


Figure 1. The Sections of 2018 LSLC (MNE, 2018)

The domain of a skill differentiates according to the section it is taken part in. The skill given in the first section is a skill that should be considered in all primary school lessons and also all grades and learning outcomes of life study lesson. The first section was included in the study because it was considered that it would be meaningful for all courses to be reconsidered for each course in accordance with the nature of the course although they were common in the curriculum. The skill in the second section is a skill that should be considered in all grades and learning outcomes in life study lesson. A skill in the third section is more practical for the students to reach the specific objectives of the course and is limited to the learning outcomes that it takes part in. The findings are given in separate tables for each of the learning and innovation skills according to the

sections of the curriculum. When a skill isn't included in a section, the row for that section is not included in the table for ease of reading.

In the coding of the learning outcomes in Section 3 of the 2018 LSLC, life study is abbreviated as LS, and then each number sequentially refers to grade, unit number and learning outcome's number. As an example, this system is included in the 2018 LSLC as in Figure 2 (MNE, 2018). In this research, learning outcomes and learning outcomes' explanation are considered separately. In the creation of the tables, the learning outcome is expressed as (LO) and the learning outcome's explanation as (LOE). In addition, the sub-expressions of a skill in the quotations from the curriculum were written in bold. Besides, in order to provide ease of reading, the relevant parts of the sentences were taken and "... " were put at the beginning or end of the sentence for the parts that were not relevant. While quoting from the curriculum, attention has been paid to the best example of the direct and indirect expression of each skill.

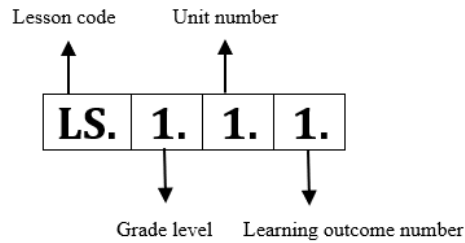


Figure 2. 2018 LSLC Learning Outcomes' Coding System (MNE, 2018)

3. FINDINGS

In this section, findings related to the direct and indirect taken place of the 21st century learning and innovation skills in 2018 LSLC are given. The findings are given separately in Tables 2, 3, 4 and 5 for each learning and innovation skill.

Table 2.

Frequency of Critical Thinking Skill by Sections in 2018 LSLC directly and indirectly

Sections of the Curriculum	CRITICAL THINKING SKILL			
	Direct (f)	Total (f)	Indirect (f)	Total (f)
1 st Section	The Curricula of MNE (1) The Competencies (1)	2	The Curricula of MNE (1)	1
3 rd Section 2 nd Grade	-	0	LS.2.3.1. (LO) (1)	1
Total (f)		2	Total (f)	2

When Table 2 is examined it is seen that critical thinking skill takes place totally twice as once under the title of The Curricula of MNE and once under the title of The Competencies directly besides it takes place once under the title of The Curricula of MNE indirectly in 1st section. Critical thinking skill doesn't not take place directly or indirectly in 2nd Section. This skill does not take place directly in 3rd Section, but indirectly is taken place with an expression.

Critical thinking skill takes place directly in 1st Section the Curricula of MNE title with the statement of "... This change describes an individual with qualifications of producing knowledge, using this knowledge in life functionally, solving problem, thinking critically, entrepreneurship, ... etc.." and in the definition of digital literacy under the Competencies title with the statement of " It covers the safe and critical use of information and communication technologies for work, daily life and communication."

Critical thinking skill is indirectly taken place in the curriculum with "questioning the causes of cases, establishes relationship between events and facts and realizes the relationships between events" sub-expressions. The "...The learning outcomes and explanations in both groups are also capable of establishing relations with life." statement of the Curricula of MNE title in 1st Section and in 3rd Section learning outcome's statement of LC.2.3.1. "Realizes the relationship between healthy growth, development and personal care, sports, sleep, nutrition." are examples of how critical thinking skills are indirectly taken place in the curriculum.

Table 3.

Frequency of Communication Skill by Sections in 2018 LSLC directly and indirectly

Sections of the Curriculum		COMMUNICATION SKILL					
		Direct (f)	Total (f)	Indirect (f)	Total (f)		
1 st Section	The Curricula of MNE (1)	3	The Competencies (11)	11			
	The Competencies (2)						
2 nd Section	-	0	Special Purposes of LSLC (1) The Skills of LSLC (1)	2			
3 rd Section	1 st Grade Learning Outcomes and Explanations (1)	8	LS.1.1.11. (LOE) (1) LS.1.1.15. (LOE) (1) LS.1.2.6 (LOE) (1) LS.1.3.7. (LO) (1) - (LOE) (2)	6			
	LS.1.1.3. (LOE) (1)						
	LS.1.1.11. (LOE) (1)						
	LS.1.1.13. (LO) (1)						
	LS.1.2.4. (LO) (1) - (LOE) (1)						
	LS.1.4.4. (LO) (1) - (LOE) (1)						
	2 nd Grade				3	LS.2.1.8. (LOE) (1) LS.2.1.9. (LO) (1) LS.2.2.8. (LOE) (1)	3
	LS.2.1.4. (LOE) (1)						
	LS.2.1.8. (LO) (1)						
	3 rd Grade				1	3 rd Grade Learning Outcomes and Explanations (1) LS.3.1.2. (LOE) (1) LS.3.1.8. (LOE) (1) LS.3.2.7. (LOE) (1) LS.3.4.4. (LOE) (1)	5
LS.3.1.1. (LOE) (1)							
Total (f)		15	Total (f)	27			

When Table 3 is examined it is seen that communication skill takes place totally three times in 1st Section as once under the title of The Curricula of MNE and twice under the title of The Competencies directly besides it takes place eleven times under the title of The Competencies indirectly. Communication skill doesn't not take place directly in 2nd Section however it takes place totally twice indirectly as once under the title of Special Purposes of LSLC and once under the title of The Skills of LSLC. This skill takes place twelve times directly and is taken place fourteen expressions indirectly in 3rd Section.

Communication skill takes place directly in 1st Section the Curricula of MNE title with the statement of "... This change... defines an individual who is entrepreneurial, determined, has communication skills, can empathize, and contributes to society and culture." and in the definition of digital literacy under the Competencies title with the statement of "It covers the safe and critical use of information and communication technologies for work, daily life and communication... in addition, it is supported by basic skills such as participation and communication with the public networks through the Internet. " and in 3rd Section under 1st Grade Learning Outcomes and Explanations with the statements of "... to communicate with others at school and at home ..." and learning outcome's statement of LC.1.2.4. "It complies with the kindness rules when communicating with family members at home." and the explanation of the same learning outcome's statement *"While communicating with family members at home, it is focused on expressing their feelings, thoughts and wishes with appropriate tone of voice, gestures and words within the framework of kindness rules. It is emphasized permission should be asked when entering the other individuals' room in the house."*

Communication skill is indirectly taken place in the curriculum with "listening, expressing feelings and thoughts, behaving, communication in mother tongue, communication in foreign languages, using information and communication technologies, using mass media, having communication information" sub-expressions. The definition of communication in mother tongue "Expressing and interpreting concepts, thoughts, opinions, feelings and phenomens both orally and in writing (listening, speaking, reading and writing) ..." statement of the Competencies title in 1st Section; and in 2nd Section as one of the fundamental life skills "using information and communication technologies" statement and in 3rd Section under the title of 3rd Grade Learning Outcomes and Explanations the statement of "... to express the demands and needs related to the school in a democratic way, neighborly relations ..." are examples of how communication skill is indirectly taken place in the curriculum.

Table 4.

Frequency of Creative Thinking Skill by Sections in 2018 LSLC directly and indirectly

Sections of the Curriculum	CREATIVE THINKING SKILL			
	Direct (f)	Total (f)	Indirect (f)	Total (f)
1 st Section	The Competencies (3) Testing and Evaluation Approach of the Curricula (1)	4	The Competencies (1) Testing and Evaluation Approach of the Curricula (1)	2
3 rd Section 3 rd Grade	-	0	LS.3.1.9. (LO) (1) LS.3.2.6. (LO) (1)	2
Total (f)		4	Total (f)	4

When Table 4 is examined it is seen that creative thinking skill takes place totally four times in 1st Section directly as three times under the title of The Competencies and once under the title of Testing and Evaluation Approach of the Curricula besides it takes place once under the title of The Competencies and once under the title of Testing and Evaluation Approach of the Curricula indirectly in 1st Section. Creative thinking skill doesn't not take place directly or indirectly in 2nd section. Creative thinking skill is taken place with two learning outcomes of 3rd Grade in 3rd Section.

Creative thinking skill takes place directly in 1st Section in the definition of taking initiative and entrepreneurship under The Competences title with the statement of "Creativity, in addition to taking innovation and risk, includes the ability to plan and manage projects to achieve goals." and in Testing and Evaluation Approach of the Curricula title with the statement of "... At this point, originality and creativity are the basic expectations from teachers."

Creative thinking skill is indirectly taken place in the curriculum with "innovation and risk taking, originality and creativity, and making original suggestions" sub-expressions. The definition of taking initiative and entrepreneurship "Creativity, in addition to innovation and taking risk, includes the ability to plan ..." statement of the Competencies title in 1st Section; and in 3rd Section learning outcome's statement of LC.3.1.9. "Makes original suggestions for effective and efficient use of school resources." are examples of how critical thinking skills are indirectly taken place in the curriculum.

Table 5.

Frequency of Collaboration Skill by Sections in 2018 LSLC directly and indirectly

Sections of the Curriculum	COLLABORATION SKILL			
	Direct (f)	Total (f)	Indirect (f)	Total (f)
1 st Section	-	-	The Curricula of MNE (1)	1
2 nd Section	The Skills of LSLC (1)	1	Issues to be Considered in the Implementation of LSLC (1)	1
3 rd Section	1 st Grade	1	LS.1.2.2. (LOE) (1) LS.1.1.14. (LOE) (1)	2
	2 nd Grade	4	2 nd Grade Learning Outcomes and Explanations (1)	2 nd Grade Learning Outcomes and Explanations (4)
			LS.2.1.7. (LOE) (1)	LS.2.1.4. (LO) (1) - (LOE) (1) LS.2.1.7. (LO) (1) - (LOE) (1)
			LS.2.1.10. (LOE) (1)	LS.2.1.8. (LOE) (1)
			LS.2.2.2. (LOE) (1)	LS.2.2.4. (LO) (1) LS.2.2.5. (LO) (1)
3 rd Grade	2	LS.3.1.1. (LOE) (1) LS.3.5.8. (LOE) (1)	3 rd Grade Learning Outcomes and Explanations (1) LS.3.1.7. (LO) (1) LS.3.1.8. (LO) (1) LS.3.2.4. (LO) (1) LS.3.5.3. (LOE) (1) LS.3.5.4. (LO) (1) LS.3.6.6. (LO) (1)	7
Total (f)		8	Total (f)	22

When Table 5 is examined it is seen that collaboraton skill doesn't take place in the 1st Section of 2018 LSLC directly however, it takes place once under the title of The Curricula of MNE indirectly. Collaboration skill takes place as one of the fundemantal life skills in the 2nd Section directly and it is taken place with a statement under the title of Issues to be Considered in the Implementation of LSLC indirectly. This skill is taken place with seven statements directly and 20 statements indirectly in 3rd Section.

Collaboration skill takes place directly in 2nd Section as one of the skills under The Skills of LSLC title; in 3rd Section under the 3rd Grade Learning Outcomes and Explanations with the statement of "... describing the address of his / her house, introducing his / her relatives, family collaboration and solidarity." and with the statement of LC.3.5.8 "Investigates Atatürk's personality traits." learning outcome's "Atatürk's work in collaboration with his friends, consideration of the opinions of others, determination, reasoning, credibility, the love of human, homeland and nation are emphasized features."explanation.

Collaboration skill is indirectly taken place in the curriculum with "sharing, empathy, participating in group activities, interact with the environment, taking responsibility of working together, participation in decision-making processes, participation in assembly-club work, participating in charitable activities, role-taking, share information, democratically expressing" sub-expressions. In 1st Section under The Curricula of MNE title the statement of "... This change describes an individual with qualifications of producing knowledge, using this knowledge in life functionally, solving problem, thinking critically, entrepreneurship, determined, has communication skills, empathize, and contributes to society and culture."; in 2nd Section under Issues to be Considered in the Implementation of LSLC title the statement of "Students should be encouraged to share their research results with their friends in class by using materials such as posters and banners ... particularly in the studies that were expected to do research." ; in 3rd Section under 2nd Grade Learning Outcomes and Explanations title the statement of "...helping with friends and participating in group activities ..." and learning outcome's statement of LC.2.1.7. "... complies with the rules for working with groups in activities." are examples of how collaboration skill is indirectly taken place in the curriculum.

4. RESULT, DISCUSSIONS AND SUGGESTIONS

In this study, 2018 LSLC was examined in terms of 21st century learning and innovation skills. It was concluded that the communication skill was mentioned 42 times, the collaboration skill 30 times, creative thinking skills 8 times and critical thinking skills 4 times in 2018 LSLC as a result of the study. This result shows that 2018 LSLC has been paid attention to include communication and collaboration skills however it includes critical thinking and creative thinking skills limitedly. 59.1% of the teachers participating in the study of Narin (2007) expressed that 2005 LSLC is capable of giving

communication skills while 45.2% expressed it is capable of giving creative thinking skills and 43.9% expressed it is capable of giving critical thinking skills. In this respect, the fact that more teachers who think that the 2005 LSLC is capable of providing communication skills is similar to the fact that the communication skills obtained as a result of this research take place more in 2018 LSLC. In Demir's (2007) study, teachers stated that the 2005 LSLC was capable of providing students with the opportunity to develop critical thinking, creative thinking, communication and collaboration skills. The result of communication and collaboration skills supports the conclusion that 2018 LSLC paid attention to include communication and collaboration skills in this study. However, the result of critical thinking and creative thinking skills does not match the results of this research completely. The reason for the different results may be the examinations of different years' curriculums in both studies or the reason may be that one of the studies was document analysis while the other was based on teacher opinions. In the study of Onur (2009), the experts stated that the 2005 LSLC served the sub-skills of critical thinking but was not sufficient. This result shows similarity with the conclusion of this research that critical thinking skills are limitedly stated in 2018 LSLC. In the study by Kutanoğlu (2014), teachers stated that the learning outcomes for creative thinking in the 2005 LSLC were not sufficient and that the learning outcomes were superficial. The result of the study conducted for the 2005 LSLC is similar to the result of the fact that the expressions of creative thinking were limited in the 2018 LSLC which were put forward in this study. When the studies in the literature and this research considered together the result that critical thinking and creative thinking skills do not find the right place in both 2005 LSLC and 2018 LSLC has emerged.

According to Seferoğlu and Akbıyık (2006), because the most important aim of education is to educate individuals who can adapt to different conditions, to think openly and flexibly, it is important to have critical thinking skills in a democratic society, and to use critical thinking and decision-making skills to solve complex social problems they encounter. Besides, according to Erdoğan (2006), the progression and future of a society is closely related to the efforts of the teachers and students in the community to improve their creativity. With creative thinking, inventions are transformed into technology and production, and economic development and social welfare levels are rising. Considering the aforementioned issues, reflecting the critical thinking and creative thinking skills sufficiently in curricula is considered important for a more prosperous society and to educate individuals who can cope with problems in the future.

In this study, 2018 LSLC was examined in terms of 21st century learning and innovation skills and some results were reached. In the light of these results, the following suggestions can be presented to practitioners and researchers:

- Teachers should consider the emphasis of 2018 LSLC on communication and collaboration skills when planning learning-teaching processes.
- In order to increase the likelihood of students gaining critical thinking and creative thinking skills, 2018 LSLC can be enriched to include the expressions of these skills.

- In order to contribute to the literature, 2018 LSLC can be examined for different skills.
- Curricula of other lessons can be studied in terms of 21st century learning and innovation skills.
- New studies can be carried out on how the 21st century skills can be developed systematically based on current studies and how this development can be monitored and evaluated.
- Skills included in the curriculum can be graded as introducing, developing and reinforcing by determining the level of the grade so that the student's skill development process can be followed.
- This study and similar studies should be taken into consideration when updating the LSLC and 21st century skills should be ensured to be included in the curriculum.

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Appendix

Appendix 1: A List of Sub-expressions Created in order to Determine the Places where Learning and Innovation Skills are Included indirectly.

Creativity Skill Sub-expressions	Critical Thinking Skill Sub-expressions
Creating originality and new ideas	To distinguish what they know and do not know
Make original suggestions	Determining the accuracy of what they know
Imagery	Questioning the causes of cases
Set up unusual connections	Establishing relationship between events and facts
Intuition, openness to emotions and passions	Realizing the relationships between events
Risk taking, courage and challenge	Determine the accuracy and integrity of the information provided
Innovation and risk taking	Defining irrationalities and false reasoning in the presented information
Collaboration Skill Sub-expressions	Communication Skill Sub-expressions
Team spirit	Facts and convictions; distinguish between facts and ideas
Team spirit	Identify logical criteria to assess the value or appropriateness of an action or behavior
Individual assessability	Express the logic behind ideas and opinions
Positive commitment	Reaching judgment and reaching logical results
Face-to-face interaction	Listening
Group work-Group assignment (group activities-group working rules)	Expressing feelings and thoughts
Equal success opportunity	Receive feedback
Empathy	Behaving
Interact with the environment	Discussion
Taking responsibility of working together	Connection
Promote collaboration	Open mindedness
Respecting group friends	To convince
Participation in decision-making processes	Raising around a common purpose
Participation in Assembly / Club work	Communication in mother tongue
Making a Peer Review	Communication in foreign languages
Participating in charitable events	Using information and communication technologies
Role-taking	Using information and communication technologies
Share information	Using mass media
Motivation	Having contact information
Motivating	
To convince	
Voting	
Democratically expressing	
Flexible	