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A STUDY ON THE EXAMINATION OF THE RELATIONSHIP BETWEEN LIFELONG LEARNING TENDENCY AND DIGITAL LITERACY LEVEL

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Abstract:
Today societies think that it is important to raise individuals having the desire for lifelong learning and digital literacy skill. The fact that current information has lost its validity and the dominance of digital tools and materials in accessing information has increased as well as the rapid change experienced in science and technology prompts societies to contemplate in this way. Education process and the teachers who are the guides of this process are essential in raising individuals having the desire for lifelong learning and digital literacy skill. In this study employing relational screening model, the relation between the social studies teacher candidates' lifelong learning tendencies and their digital literacy level is investigated and lifelong learning tendencies and digital literacy levels of the candidates are determined according to several variables. The research population is composed of 188 teacher candidates studying in the department of social studies teaching of a state university in Marmara Region of Turkey in fall semester of 2019-2020 academic years. As data collection tool "Lifelong learning scale", "Digital literacy scale" and "Personal information form" are used. In order to determine the source of the difference among the data obtained, T-Test, Single-Factor Variance Analysis (ANOVA) and in determining the relation between the scales, Regression Analysis and Pearson's correlation coefficient are used. The findings indicate that lifelong learning tendencies of the teacher candidates are high while their digital literacy skills are at a medium level. Another finding of the research is that the candidates' lifelong learning tendencies vary according to gender and class level while these tendencies do not vary according to socio-economic level. Digital literacy level of the teacher candidates varies according to gender, class and socio-economic levels. The findings regarding the relation between the lifelong learning tendencies and digital literacy level indicate that there is a moderate, positive and significant relationship.

Keywords: lifelong learning, digital literacy, relational screening

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1. Introduction

The 21st century witnesses important technological developments. In this century the proficiencies and qualifications that the individuals have fall behind the inescapable technological growth. Accordingly, the individuals are expected to continuously update and adapt themselves to the changes. Individuals join in this adaptation process by means of education. Considering today's educational concept, it is seen that a concept that allows individuals not remaining limited to educational institutions to continuously update their proficiencies and qualifications is supported. This concept is explained with lifelong learning approach.

Lifelong learning approach aspires to develop the information, skill and proficiencies that individuals may need in various areas from their birth to death (Durak & Tekin, 2020). This approach can be defined as individuals' developing intellectual and physical structures with the interaction they form with their environments during their life. The approach put forward by John Dewey, Basil Yeaxle and Eduard Lindeman in 1920s objects to the limited learning environment and age of learning of the educational institutions and also supports the idea of reducing the government's weight on the educational process (Güçlü, Bostan & Dabak, 2012). The leading motive behind the emergence of this concept is to develop reading, writing and basic mathematical skills of the individuals out of school age. However, due to the increase in the educational level and in the number of the individuals graduate of higher education, and the developments in the information technologies have made lifelong learning necessary for all the individuals (Fischer & Konomi, 2007). The process of lifelong learning is also put on the agenda by international organizations like United Nations Educational, Scientific and Cultural Organization (UNESCO) and Organization for Economic Co-Operation and Development (OECD). UNESCO, in the report they prepared for lifelong learning, mentioned that all individuals without any exception have the right for lifelong learning and included the importance of the lifelong learning process to have a quality that will prepare the youths to new developments (Samacı & Ocakcı, 2017). In developed societies, lifelong learning is regarded as individuals learning together by supporting each other. Besides, solving the problems experienced in formal learning process with online learning environments and "social learning" approach is included in significant issues. In social learning approach, individuals are supported to learn in groups by using digital sources. On the other hand, achievement of lifelong learning process is associated with e-learning process (Smyrnova, 2013). Lifelong learning process supported by many international organizations is regarded significant in order to provide sustainable economic development especially by the industrial countries. The aim here is to provide qualified workforce (Markowitz and Russell, 2006).

Lifelong learning process has extended its aim and scope in time. Accordingly, it can be said that lifelong learning aspires to develop some qualifications in individuals. These qualifications are evaluated as sub-dimensions of lifelong learning. These sub-dimensions;

- *Qualifications for Communication in Native Language:* It is being capable of expressing thoughts and feelings in verbal or written form.
- *Qualifications for Foreign Language:* It is being capable of using a foreign language in oral and written narrative actively.
- *Basic Qualifications for Science and Technology:* It is about learning fundamental principles of science and technology and closely following the important developments experienced in science and technology.
- *Mathematical Qualifications:* It is being capable of doing addition, subtraction, multiplication and division operations both mentally and in written form and using mathematical qualifications in daily life.
- *Qualifications for Learning How to Learn:* It is about individuals being aware of their interests and needs and capable of arranging the learning process.
- *Qualifications for Social Responsibility:* It is about active participation of individuals in social life and taking responsibility.
- *Qualifications for Cultural Domain:* It is about expressing feelings by means of art and literature and suggesting creative ideas.
- *Qualifications for Digital Domain:* It is about reaching the information, explaining the meaning of the information and producing new information. Besides, being in touch through internet and tending to cooperate are also among these qualifications (Şahin & Arcagök, 2014, s.397).

The sub-dimensions above indicate that the importance of the sub-dimension of digital domain is increasing gradually nowadays. In this century, individuals mostly reach the information they need using digital tools and materials. Digital materials and Web 2.0 technologies offer individuals learning environments at an informal level and more flexible form of the teacher and student relationship observed in formal education (Acar, 2015). Furthermore, the relevant technologies also form suitable learning environment for the individuals having different learning styles. It can be said that these advantages provided by the digital environments to the individuals have an important place in meeting the need for learning (Aspin & Chapman, 2001). However, using digital technologies properly is as important as having these technologies. In this context, the issue of reaching, analyzing, interpreting and evaluating the information needed out of unlimited pile of information come to the forefront (Shenton, 2009). Digital literacy is a concept arisen from this need. This concept can be defined as the ability to reach, organize and evaluate the information needed with the active use of digital technology (Direkçi, Akbulut & Şimşek, 2019). The individuals having digital literacy skill can actively reach the information they need, distinguish the truth and falsity of the information, reach new information from the correct information they obtain and can share them on digital platforms (Morrison & Garcia, 2011). Having this skill is important for the individuals having a desire for lifelong learning. The individuals having a desire for lifelong learning should have a digital literacy skill in order to follow the continuously changing and developing technology and meet their economic, social and cultural needs.

In the current century, the countries attach importance to the presence of citizens that have a desire for lifelong learning and achieve this desire by actively using technology (Demirel, 2009). Countries can achieve this desire by means of the curriculum having the content that will serve their purpose. Fundamental principles of the curriculum in Turkey and the world indicate that lifelong learning and digital literacy skill are provided with the curriculum of mostly the social studies, Turkish and science lessons at a primary and secondary school level (Tunca, Şahin, Aydın, 2015).The main objective of social studies curriculum is to raise active citizens. Active citizens are the individuals who know their rights, fulfill their responsibilities, continuously adapt themselves to the changing science and technology and are loyal to their country with the bond of citizenship. The constructivist approach, basic principle of the curriculum, also supports lifelong learning. In constructivist approach, the effort of the individual to reach the information and improve themselves is appreciated and learning process is beyond age, time and physical conditions. In this regard, it can be said that social studies curriculum is important in achieving lifelong learning skill. Social studies curriculum is also important in achieving digital literacy skill. Social studies curriculum has content for benefiting from technological and digital developments and achieving digital proficiency in students. Using the expression "*sleeping giant*" for the place of technology and digital developments in social studies curriculum, Martorella states that this potential has not been used adequately yet (Swan & Hofer, 2008). In this regard, it can be said that social studies curriculum is important in providing the students both with the desire for lifelong learning and with digital literacy skill. Executors of the curriculum are teachers. It can be said that teachers can take an active role in achieving lifelong learning tendency and digital literacy skill in the students. When the future teachers who have a desire to always improve themselves both professionally and personally considering the necessities of the time, have the sense of lifelong learning and digital competence start their professional life can be a role model for the students as well (Óhidy, 2008).

Accordingly, the aim of the current study is to investigate the relationship between the social studies teacher candidates' lifelong learning tendencies and digital literacy levels. In line with this aim, answers are sought to the following questions:

- What is the level of the teacher candidates' lifelong learning tendencies and digital literacy qualifications?
- Do teacher candidates' lifelong learning tendencies show significant difference according to the gender, class level and socio-economic level?
- Do teacher candidates' digital literacy levels show significant difference according to the gender, class level and socio-economic level?
- Is there a significant relationship between the teacher candidates' lifelong learning tendencies and digital literacy levels?

2. Method

2.1 Model

In the study that aims to investigate the relationship between the social studies teacher candidates' lifelong learning tendencies and digital literacy levels and their lifelong learning tendencies and digital literacy levels in terms of various variables, relational screening model is used. In this model, it is aimed to determine whether two or more variables show a coordinative alteration or not. In case there is a coordinative change, it is determined how this situation occurs (Karasar, 2011). The findings obtained are important in terms of indicating the relationship between the variables.

2.2 Study Group

The research population is composed of 188 1st, 2nd, 3rd and 4th year teacher candidates studying in the department of social studies teaching of a state university in Marmara Region of Turkey in fall semester of 2019-2020 academic year. In the study, one of the types of purposeful sampling, criterion sampling is utilized. In the criterion sampling, some of the predetermined criteria or all the conditions meeting the criteria are studied. Either the determined criterion can be formed by the researcher or a readily-prepared criteria list can be utilized (Marshall & Rossman, 2014). Critical conditions regarding the subject determined by the researcher are used for criterion sampling. However, it is important for the criteria determined for the critical conditions to comply with the essence of the study in general. Just as any critical condition determined is not a criterion sampling, every criterion may not be suitable for a critical condition (Baltacı, 2018). The basic criterion determined by the researcher in determining the sample group in the study is that the study group study in the curriculum including lifelong learning and digital literacy skill. Accordingly, the teacher candidates studying in social studies curriculum are determined as samples.

2.3. Data Collection Tools

As data collection tool "Lifelong learning scale", "Digital literacy scale" and "Personal information form" are used. Detailed information regarding data collection tools are mentioned below.

a. Lifelong Learning Scale

Developed by Wielkiewicz and Meuwissen (2014) to determine the lifelong learning desire of the individuals in university and in the other group and adapted to Turkish by Engin, Kör and Erbay (2017), the scale is a 5-likert scale having the options 'never', 'rarely', 'sometimes', 'often', and 'always'. Exploratory factor analysis revealed that factor loads of the scale items vary between 0.66 and 0.79. As a result of the process and analysis, the scale is gathered in a single dimension. As a result of the factor analysis applied to the scale, 1 item is removed from the scale that has 16 items originally. In general Cronbach's Alpha reliability coefficient of the scale is found to be 0.93. The

Kaiser-Meyer-Olkin (KMO) coefficient of the scale is found to be 0.95 (Engin, Kör & Erbay, 2017, p.1561). The variance of the scale was determined as 52,651. In this study, the Bartlett Globality test result of the scale was significant and the Kaiser-Meyer-Olkin (KMO) coefficient was 0.93. The data matrix was determined to be suitable for factor analysis. Factor analysis with the data of this research shows that no matter should be removed from the scale and that the scale should be one-dimensional. The factor loads of the substances in the scale ranged between 0.66 and 0.76, while Cronbach's Alpha value of the scale is found to be 0.87.

b. Digital Literacy Scale

Another scale used in the study is digital literacy scale which was developed by Ng in 2012 and adapted to Turkish by Üstündağ, Güneş and Bahçıvan (2017). The scale is a 5-likert type having the options 'strongly agree', 'agree', 'neither agree nor disagree', 'disagree', and 'strongly disagree'. Exploratory factor analysis revealed that factor loads of the scale items vary between 0.46 and 0.74. As a result of the process and analysis, the scale is determined to be one dimensional. Composed of 10 positive items, the scale is applied to 979 university students in order to test the validity and reliability and Cronbach's Alpha internal consistency coefficient is determined as 0.86 in general in the scale (Üstündağ, Güneş & Bahçıvan, 2017, p.20). In this study, the Bartlett Globality test result of the scale was found to be significant. The Kaiser-Meyer-Olkin (KMO) coefficient of the scale was determined to be 0.80. In this context, it can be said that the data matrix is suitable for factor analysis. Factor analysis shows that the scale should be collected under one dimension as in the original and no matter should be removed from the scale. It was also found that the factor loads of the substances involved in the scale vary between 0.50 and 0.79 and Cronbach's Alpha value of the scale is found to be 0.85.

c. Personal Information Form

The data in relation to the gender, class level and socio-economic levels of the teacher candidates are collected in the personal information form prepared by the researcher.

Table 1: Demographic Characteristics of the Teacher Candidates constituting the Study Group

Gender	**N**	**%**
Female	90	47.0
Male	98	53.0
Class Level		
1st Year	51	27.1
2nd Year	43	22.8
3rd Year	40	21.2
4th Year	54	28.7
Socio-economic Level		
Low	62	32.9
Medium	68	36.1
High	58	30.8

The table showing the demographic characteristics of the teacher candidates revealed that the rate of the male teacher candidates is higher than the female teacher candidates while the distributions of the candidates according to the class level are close to each other. Socio-economic levels of the teacher candidates indicate that medium level has the highest rate.

3. Findings

The findings of the study are arranged by handling the sub-goals of the study. Accordingly, the descriptive analysis results of the teacher candidates' lifelong learning tendency and digital literacy level are given in Table 2.

Table 2: Descriptive Analysis Results of the Teacher Candidates' Lifelong Learning Tendency and Digital Literacy Level

Scales	N	$\bar{X}$	Ss
Lifelong Learning	188	4.47	1.25
Digital Literacy	188	3.21	0.79

Descriptive analysis results indicate that teacher candidates' lifelong learning tendencies are ($\bar{X}$=4.47) high while their digital literacy levels are ($\overline{X}$=3.21) moderate.

The findings of the t-test that aims to determine the relationship between the gender and lifelong learning tendencies of the teacher candidate's constituting the study group are included in Table 3.

Table 3: Averages of the Teacher Candidates' Lifelong Learning Tendencies According to Gender

	Gender	N	$\bar{X}$	Ss	Sd	T	P
Lifelong Learning	Female	90	45.00	6.32	186	2.105	.00*
	Male	98	42.66	7.14			

The findings revealed that lifelong learning tendency show difference according to the gender variable. Current difference is however in favor of the female teacher candidates ($t(186)= 2.105$, $p< .05$). The finding obtained can be explained with social gender concept. Sex means anatomical and physiological differences that the individuals inherently have. These differences seen in biological structure result in individuals' classification as female and male. Besides biological sex, there is also a concept of social gender including the behaviors and responsibilities expected from males and females by the society (Giddens, 2008). Social gender concept supports male power and decisiveness in economic, social and cultural life, and that women have a passive personality by nature and should be under the control of men in social life. This condition limits women in all areas in life while increasing the impact and power of men in social life (Bingöl, 2014). Women have the desire to continuously develop themselves with formal and informal learning

processes in order to advance beyond the determined limits and have the same rights and statues as men.

ANOVA table that shows the relationship between the teacher candidates' lifelong learning tendencies and class levels is below.

Table 4: ANOVA Results of the Lifelong Learning Level According to the Class Level Variable

Source of Variance	N	$\bar{X}$	Ss	F	P	Significant Difference
1. Class (A)	51	37.18	6.76			
2. Class (B)	43	44.49	5.40	35.634	.00*	A-C, A-D, B-D
3. Class (C)	40	50.14	4.40			
4. Class (D)	54	51.21	4.45			

The findings in Table 4 indicate that lifelong learning tendency show difference according to the class level (F(3-184)= 35.634, p<.05). The results of Scheffe test conducted to determine the difference between the class levels revealed that there is a significant difference between the 4th year students and the 1st and 2nd year students. Current finding is that lifelong learning tendencies of the 4th year teacher candidates are higher than the 1st and 2nd year teacher candidates. Besides, there is a difference between the lifelong learning tendencies of the 1st and 3rd year teacher candidates in favor of the 3rd year students. According to the findings, the higher the class level, the higher the lifelong learning tendency increases. The finding obtained explains that the teacher candidates have a traditional point of view in the 1st year of university, but as they take positive science courses in later years, their point of view start to change. At the same time, the candidates spending more time with the individuals having different cultural structures is also another factor that positively affects their lifelong learning tendencies.

The results of ANOVA test conducted to determine whether teacher candidates' lifelong learning tendencies show difference according to the socio-economic level are given in Table 5.

Table 5: ANOVA Results of Lifelong Learning Tendencies According to Socio-economic Level

Source of Variance	Sum of Squares	Sd	Average of Squares	F	P	Significant Difference
Between-groups	52.673	2	26.336	.543	.50*	----------
Within-groups	20306.13	185	41.022			
Total	20358.80	187				

The findings in Table 5 indicate that there is not any significant difference between the teacher candidates' lifelong learning tendencies and socio-economic levels (F(2-185)= .543, p>.05).In this context, it can be said that the low, middle and high income teacher candidates have close lifelong learning tendencies. This condition can be evaluated in terms of providing equality of opportunity in education. Equality of opportunity in education can be defined as providing the necessary conditions for all the individuals in order to receive education suitable to their interests and needs. In many countries of the world, great developments are experienced in education in the 21st century. The increase

in studies conducted in order to provide equality of opportunity in education such as supporting formal education process with informal education process, removing some obstacles educational activities may have increased the lifelong learning tendencies of the individuals.

The results of t-test conducted to determine whether the teacher candidates' digital literacy levels show any difference according to the gender variable are given in Table 6.

Table 6: T-test Results of Digital Literacy Level According to Gender

	Gender	N	$\bar{X}$	Ss	Sd	T	P
Digital Literacy	Female	90	31.19	6.70	186	1.582	.03*
	Male	98	33.17	9.02			

The results of t-test showing the relationship between the teacher candidates' digital literacy level and gender revealed that male teacher candidates' digital literacy levels are higher than the female teacher candidates $t(186)= 1.582$, $p< .05$). This condition can be explained with the concept of digital divide. This concept means that the business organizations and individuals showing difference in terms of socio-economic structure in different geographical regions do not have the same opportunities in accessing information technologies and internet. Digital divide is apparently seen between females and males. Many studies conducted in the world on the condition of females and males having and using technology indicate that there is inequality against women. Digital divide is however based on gender inequality (Baştürk, Akça & Kaya 2016). Gender inequality leads to digital inequality. The women exposed to digital inequality can use technological tools and materials under the control of men temporally. On the other hand, use of technological tools and materials by men is supported by the society and they do not meet with an obstacle while using these tools. This inequality is attempted to be legitimized by stating that men have inherently higher digital competence than women.

The results of ANOVA conducted to determine whether the teacher candidates' digital literacy levels show any difference according to the class variable are given in Table 7.

Table 7: ANOVA Results of Digital Literacy Levels According to the Class Level

Source of Variance	N	$\bar{X}$	Ss	F	P	Significant Difference
1. Class (A)	51	53.88	10.13			
2. Class (B)	43	43.21	8.11	4.666	.00*	A-B, A-C, A-D B-C
3. Class (C)	40	40.81	8.20			
4. Class (D)	54	40.65	7.29			

ANOVA test conducted to determine whether digital literacy level shows difference according to class level indicates that digital literacy shows significant difference according to the class level ($F(3\text{-}185)= 4.666$ $p<.05$). Source of the difference revealed that there is a difference between the 1st year students and 2nd, 3rd and 4th year students in

favor of the 1st year students. Besides, there is a significant difference between the 2nd year and 3rd year students in favor or the 2nd year students. Based on the finding, it can be interpreted that the young individuals closely following and adapting more easily to the rapid developments in digital technologies and accordingly a few years of age disparity in the same generation can affect the level of digital literacy. The difference observed in the level of digital literacy can be seen more among the individuals having a wide age disparity. This condition can be explained with the concepts of digital native and digital immigrant. Digital native refers to the 21st century children who meet virtual platform since their birth and actively use technology during their daily activities. Digital immigrants, on the other hand, refer to the generation that try to adapt to the technological developments experienced and think in a different way than the digital natives (Bilgiç, Duman, Seferoğlu, 2011). Significant differences are observed between the digital immigrants and digital natives in terms of digital literacy level.

The results of ANOVA indicating the relationship between the teacher candidates' digital literacy levels and socio-economic levels are given in Table 8.

Table 8: ANOVA Results of the Teacher Candidates' Digital Literacy Levels According to the Socio-economic Levels

Source of Variance	N	$\bar{X}$	Ss	f	P	Significant Difference
Lower SEL (A)	62	56.21	9.55			
Medium SEL (B)	52	57.58	8.08	3.135	.02*	A-C
Higher SEL (C)	68	59.15	9.01			

ANOVA test conducted to determine whether digital literacy level shows difference according to the socio-economic level revealed that there is a significant difference between the students having lower and higher socio-economic structures ($F(3\text{-}185)= 3.135$ $p<.05$) Accordingly, digital literacy level average of the teacher candidates having lower socio-economic level is $\bar{X}= 56.21$ while average of the teacher candidates having higher socio-economic level is $\bar{X}= 59.15$. The finding is evaluated in the context that the supply of digital tools and materials and the opportunity to access the internet are affected by the socio-economic structure.

Pearson's correlation coefficient table showing the relationship between the teacher candidates' lifelong learning tendencies and digital literacy level is given below.

Table 9: Pearson's Correlation Coefficients Between the Variables

Variable	1	2
Lifelong Learning	1	.401*
Digital Literacy	.401*	1

The findings in Table 9 indicate that there is a moderate, positive and significant relationship between the lifelong learning tendencies and digital literacy level. ($r =.401$; $p <.01$). Regression analysis is conducted in order to determine to what extent lifelong learning tendencies explain digital literacy level. Analysis results are given in Table 10.

Table 10 revealed that there is a moderate, positive and significant relationship between the lifelong learning tendency and digital literacy level. (R=.401; R2=.188; F= 61.222; p=.000; *p<.05). This finding indicates that about 16% of the digital literacy level is explained with lifelong learning tendency. Standardized regression coefficient (β) show that lifelong learning tendency (t = 7.192; p <.05) is a significant predictor of digital literacy level.

Table 10: Regression Results of the Teacher Candidates' Lifelong Learning Tendency in terms of Digital Literacy Level

Dependent Variable (lifelong learning)					
Variable	**B**	**Standard error**	**B**	**t**	**p**
Lifelong Learning Tendency	.712	.103	.401	7.192	.000
Note : R =.401; R2=.188; F=61.222; p =.000; *p<.05					

4. Conclusion, Discussion and Suggestions

In this study, the relation between the social studies teacher candidates' lifelong learning tendencies and their digital literacy level is investigated and lifelong learning tendencies and digital literacy levels of the candidates are determined according to several variables. As a result of the study, the first finding is that teacher candidates' lifelong learning tendencies are ($\bar{X}$=4.47) high while their digital literacy levels are ($\overline{(X}$=3.21) moderate. High lifelong learning tendencies of the teacher candidates indicate that they are open to develop themselves both personally and professionally. The current finding is associated with supporting lifelong learning approach by the basic approach adopted by the curriculum that the candidates' study. Social studies curriculum adopts the constructivist approach. Constructivist approach supports that the learning process cannot be limited with several factors (age, learning environment, etc.) and this process can continue during the lifetime of the individual on their request. It can be said that this approach is parallel to the lifelong learning approach. The fact that teacher candidates have adopted this approach might have increased the desire for lifelong learning. The study by Tunca, Şahin and Aydın (2015) found out that lifelong learning tendency of the teacher candidates studying in social studies and science teaching that support the skill of lifelong learning is higher than the candidates studying in classroom teaching. Digital literacy levels of the candidates, however, are moderate. When the lessons in social studies curriculum are examined, it is observed that verbal learning is predominant, internet, computer and various digital tools are not needed much. This condition might have been determinant on the digital literacy level of the candidates. The study by Özerbaş and Kuralbayeva'nın (2018) revealed that digital literacy level of the candidates studying social studies teaching is moderate while digital literacy level of the candidates studying in mathematics is high. Considering that the need for digital sources in social studies curriculum will probably increase in the future, it can be said that this condition is likely to create a drawback for the teacher candidates. In this context, it is thought that it will be useful for the candidates to improve their digital literacy skill. Another finding

obtained as a result of the study; however, lifelong learning tendencies show difference according to the gender variable and this difference is in favor of female teacher candidates ($t(186)= 2.105$, $p< .05$). The finding can be explained with social gender inequality, a consequence of the patriarchal ideology. In patriarchal ideology, man is dominant in political, social and economic areas. While this condition increases the rights of men in the society, it brings along some inequalities in terms of women. Thus, according to this ideology, the only way for the women is to increase their educational level in order to have same status as men. Higher desire for lifelong learning in women than in men can be interpreted as an effort to remove this inequality. The study by Jackson (2003) emphasizes that women are exposed to some inequalities in social life and have the desire for removing these inequalities, having a powerful place in professional life and improving themselves during their lifetime. Considering that women have an active role in taking care of and raising children, it is possible for the women having the desire for lifelong learning to also raise children having this perception. High lifelong learning tendency of women can be important in this sense as well. Another finding of the study is that lifelong learning tendencies show difference according to the class variable ($F(3\text{-}184)= 35.634$, $p<.05$). Source of the difference indicate that there is a difference between the 4th year students and 1st and 2nd year students in favor of the 4th year students and between the 1st and 3rd year students in favor of the 3rd year students. According to the findings, the higher the class level, the higher the lifelong learning tendencies increase. The finding can be interpreted in the way that as the students advance in the class levels, they receive more positive science courses and spend more time with the individuals from different cultures. The 1st year university students are still under the effect of traditional family structure. This condition might have led the students to have a limiting attitude towards learning process. The courses received by the students in later years might have changed the limiting attitude towards the learning process. Examining the teacher candidates' lifelong learning tendencies, the study by Coşkun (2009) revealed that there is a significant difference between the 1st and 4th year students in favor of the 4th years. Coşkun (2009) attributed the difference between the 1st and 4th year students to the self-improvement of the teacher candidates thanks to the longer learning period. According to the relationship between the teacher candidates' lifelong learning tendencies and socio-economic levels, there is not any significant difference ($F(2\text{-}185)= .543$, $p>.05$). Low, middle and high income teacher candidates having close lifelong learning tendencies can be attributed to providing equality of opportunity in education and to the individuals' desire for self-improvement. The studies on providing equality of opportunity in education comprise many important activities such as free educational activities, meeting the educational need of individuals out of school age with distance education and providing equality of gender in education. The individuals improving themselves in the presence of developing science and technology and having the desire for keeping up with the times can also be evaluated among the factors affecting this result. The current finding is also accepted as positive in regards to the presence of the citizens updating themselves before the changing science and

technology, which is needed by the countries. The study by Kılıç (2014) found out that the teacher candidates' socio-economic levels do not have an effect on their lifelong learning tendencies. Kılıç (2014) explained this finding in the way that the individuals' desire for lifelong learning cannot be limited with financial possibilities.

The relationship between the teacher candidates' digital literacy levels and genders revealed that there is a significant difference in favor male teacher candidates $t(186)= 1.582$, $p< .05$). Higher digital literacy level of male teacher candidates compared to the female teacher candidates can be attributed to the gender inequality leading to digital inequality and to the interest of males in technological developments and tools. Gender inequality, an indicator of patriarchal ideology, also manifests itself in digital platform. In this ideology, inequality between the genders is in question, and it is seen that males are dominant in all areas of life. Support of the idea that active and efficient use of technology is more suitable to man's nature is also a reflection of this concept. Both males and females are imbued with this concept in social life. However, powerful societies are possible with the presence of the citizens who have a command of science and technology and can use digital sources in line with the requirements. In this regard, it can be said that it is important not only for males but also for females to have high digital literacy skill. Thus, it is significant to support and improve females' use of digital tools and materials. The studies (2014) by Antonio and Tuffley revealed that the time used with technological tools and materials and spent in online environments by females is lower than males. The relationship between the digital literacy and class level indicate that there is a significant difference according to the class level ($F(3\text{-}185)= 4.666$ $p<.05$). Among the all class levels, 1st year students have a higher average of digital literacy than the other levels and the higher the class level the lower the average becomes. It is known that the youth more rapidly adapt to the technological developments. Therefore, it is possible to observe differences in following and actively using technology as the age range increases. The study findings are evaluated accordingly. The relationship between the digital literacy level and socio-economic level revealed that there is difference between the low and high economic level. The individuals having high socio-economic level have a higher average of digital literacy level than the low socio-economic level. The increase of financial possibilities can also increase the supply and use of digital tools and materials. The study by Ocak and Karakuş (2019) indicated that digital literacy self-competence of the teacher candidates changes according to the opportunity to access computers, and the candidates having access to computers have higher digital literacy self-competence. Increasing the competence of future teachers in digital areas is also important for the digital competence of students they will raise. In eliminating this digital inequality caused by socio-economic condition, it would be influential to provide all the educational levels with digital tools and materials. The findings regarding the relation between the lifelong learning tendencies and digital literacy level indicate that there is a moderate, positive and significant relationship ($r =.401$; $<.01$). This finding indicates that about 16% of the digital literacy level is explained with lifelong learning tendency. Regression analysis results revealed that lifelong learning is a significant predictor of

digital literacy. In other words, the higher the lifelong learning level of the individuals, the higher their digital literacy level is. The finding suggests that the individuals having the desire for lifelong learning attach importance to the presence of digital tools and materials in accessing the information. The increase in individuals' digital literacy level positively affects the access to information and active use of the information. In this age, it is inevitable for the individuals having the desire for lifelong learning to improve their digital competence. Today, considering the leading countries of the world, it is seen that they have citizens who have the desire to improve themselves continuously and closely follow the digital developments. These citizens are materially and morally supported by the government. It is possible for Turkey to be included among the leading countries of the world with the support of the citizens having these competences. The study finding is not compatible with the study finding by Özoğlu (2019) In the study by Özoğlu (2019), there is not any relationship between the lifelong learning tendency and digital literacy. These different findings in the study by Özoğlu and the study by the researcher can be due to the difference of the sample groups in both researchers. While the sample group of the researcher is composed of the social studies teacher candidates, the sample group of the study by Özoğlu (2019) is composed of the teacher candidates studying in preschool teaching, classroom teaching, elementary mathematics teaching, English teaching, German teaching, French teaching, fine arts and art teaching, psychological counseling and guidance, and special education teaching. Social studies curriculum is a program that leads the learners to lifelong learning.

The following suggestions are made in line with the study findings:

- Various activities that will support the lifelong learning tendency of the teacher candidates can be included in universities.
- More contents can be included in social studies curriculum in order to develop digital literacy skill.
- Various action plans can be developed for digital literacy during and after university education.
- Technological infrastructure services can be increased in all educational levels in order to remove the socio-economic obstacles before digital literacy skill.All strata of the society can be supported to benefit from these services.
- The obstacles for women to use digital tools and materials can be removed. An awareness to support the efforts of women to increase digital competence can be raised in society.

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