

# Investigation of university students' lifelong learning tendencies in terms of various variables

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## ABSTRACT

The paper aims to investigate lifelong learning tendencies of university students in terms of different variables. For this purpose, the survey method was employed. The sample of the study consisted of 500 university students studying at various undergraduate programs at a state university in Turkey during 2018-2019 academic year. The personal information form prepared by the researchers and the "Lifelong Learning Tendency Scale" was used to collect data. Descriptive statistics such as frequencies, means, and standard deviations were computed to display students' overall responses to the lifelong learning tendency scale items. The findings of the study showed that the lifelong learning tendency levels of students differed significantly according to variables as gender, grade, following developments in information and communication technologies, faculty and participation in activities such as conferences, panels, symposiums etc. held at the university. Results also indicated that lifelong learning tendencies of university students were at a moderate level.

**Keywords:** Lifelong learning, tendency, higher education, university students, education.

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## INTRODUCTION

Education has become an important issue in ensuring sustainable and equal development as a result of economic, political and cultural changes and technological developments in today's societies (Kaplan, 2016). In the information society that we live in, educational levels have a key role for the economic development of the countries and to enable the countries to compete with each other at an international level (Hanushek and Woessmann, 2007). Therefore, the main goal of the countries has shifted to transforming the societies into an information society with the help of education.

The rapid innovations, developments and alterations that focus on communication and information technologies have also changed the characteristics that individuals should have. As a result, individuals who constantly learn, develop, renew themselves, and produce new information are needed in order to keep pace with changing world conditions and rapid

innovations (Köğçe et al., 2014). In addition, individuals are expected to be equipped with skills such as critical thinking skills, problem solving skills, communication skills, collaborative working skills, creativity, digital literacy, information literacy, media literacy, information and communication technologies literacy in the information age (Trilling and Fadel, 2009). Therefore, individuals should not only acquire knowledge in a passive way to get these skills, but also they should use the knowledge they learn in life and acquire the skills of learning to learn, thus become lifelong learners (Brown, 2005). Hence, lifelong learning is regarded as one of the skills that is required for the individuals to realize their full potential.

Lifelong learning is defined as learning activities that continue in all areas of human life and are important in the development of individuals without time and space limitations (Aksoy et al., 2017; Gu et al.; 2011). In addition, lifelong learning is described as a process which

improves the skills and knowledge of the individuals that are gained throughout their lives (Aspin and Chapman, 2000). According to the Commission of the European Communities (CEC) (2000: 3), lifelong learning is described as, *“all purposeful learning activity undertaken throughout life with the aim of improving knowledge, skills and competencies within a personal, civic, social and/or employment related perspective”*.

Lifelong learning refers to a process that is not limited to schools, but continues at every stage of life (Knapper and Cropley, 2000). In addition, the main rationale behind lifelong learning is that it is not possible to equip the learners with all the knowledge and skills that are required to prosper throughout the lifetime only at schools. People need to enhance their knowledge and skills continuously to overcome the problems they encounter and to achieve personal development (Sharples, 2000). Therefore, lifelong learning aims at interiorizing education, reaching learning opportunities on universal dimensions, providing learning not only in educational institutions but also in various learning environments (Kehm, 2001). In addition, in this process, individuals are able to manage their feelings and available resources effectively, are willing to learn and direct their own learning processes effectively (De la Harpe and Radloff, 2000). In lifelong learning understanding, it is aimed to support individuals in a way that enables them to reach knowledge, skills, understanding and values they will need in life (Ambrósio et al., 2014).

Individuals with lifelong learning skills can plan their own learning, are open to learn in informal environments as well as the formal learning environments, can integrate their existing knowledge to various subject fields in appropriate situations, are active and can use various learning strategies to solve problems and for different situations (Knapper and Cropley, 2000). In addition, it is argued that individuals should have effective communicative skills in both mother tongue and foreign languages, be open to learn, use technology, be active and have cultural awareness (Kaplan, 2016).

### **Lifelong learning policies in Turkey**

Lifelong learning has a long history in Turkey. In Turkish culture, it was stated years ago that there is no limitation in terms of time and place for learning, and learning can take place in every moment of human life. However, in recent years the concept of lifelong learning has been considered as an approach within education and training models in Turkey as in other countries. Accordingly, in Turkey the General Directorate of Lifelong Learning Education was established in 2000 under the authorization of Ministry of National Education (Güleç et al., 2012). This directorate is responsible for making policy, implementation, monitoring and evaluation of the lifelong learning to disseminate in Turkey. Moreover, it

conducts activities to support the citizens who are not able to access in formal education, or who drop out the school or who graduated from the formal education in the field of common or vocational and technical training through non-formal education (European Commission, 2020). On the other hand, in the 8<sup>th</sup> Five-Year Development Plan of the State Planning Organization, the objectives of lifelong learning are stated as follows (SPO, 2000: 6): *“Lifelong education based on the understanding that education should be a world-wide and lifelong process for the full development of human personality in the face of the rapid scientific, technical, economic and social changes aims to bring individuals to a level that they can cope with the economic, cultural and political changes that occur in the life of society. In summary, lifelong education is directed towards three main goals. These are to provide personal development of individuals by creating opportunities in lifelong learning, to realize social integration and to ensure economic growth.”*

In the Turkey Lifelong Learning Strategy Paper issued by the Ministry of National Education (MoNE) in 2009, lifelong learning is described as *“all kinds of learning activities in which an individual participates throughout his or her life to improve his or her knowledge, skills, interests, and competencies with a personal, social, and employment-related approach”* (MoNE, 2009: 7). In the Lifelong Learning Strategy Paper adopted for the period 2009-2013, lifelong learning is considered as all kinds of learning activities that individuals engage in throughout their lives in order to develop their knowledge, skills, interests and competencies. It is also stated that learning continues from “cradle to grave” and can take place at any age and anywhere, regardless of a certain age and environment; lifelong learning covers all kinds of education and training as formal, non-formal and free learning. With the Lifelong Learning Strategy Paper and Action Plan for the period 2014-2018, it is aimed to achieve a more systematic structure in line with national and international approaches. In the National Lifelong Learning Strategy Paper for the Period of 2014-2018, prepared to increase the effectiveness and efficiency of the lifelong learning system, the following issues are prioritized (Lifelong Learning, 2020):

- Establishing lifelong learning culture and awareness in the society,
- Increasing lifelong learning opportunities and provision,
- Enhancing access to lifelong learning opportunities,
- Improving lifelong guidance and counseling system,
- Improving recognition of prior learning system,
- Improving lifelong learning monitoring and evaluation system

Based on this information, it can be argued that lifelong learning has been considered as an important issue in Turkey and it is organized under the authorization of Ministry of National Education.

## Higher education in promoting lifelong learning skill

Lifelong learning places new demands on all types of learning activities and educational institutions. In this process, schools play the most important role (Syslo, 2004) with the functions such as introducing basic skills required for lifelong learning through compulsory education, updating school curricula and making necessary changes in a way to provide students with different learning opportunities, and encouraging students to engage actively in their own educational planning processes (Demir-Basaran and Sesli, 2019). Although all education institutions are important in promoting lifelong learning skills of students, higher education institutions have the greatest responsibility (Knapper and Cropley, 2000; Yang, Schneller and Roche, 2015; Washer, 2007).

The most important task of higher education institutions in the 21<sup>st</sup> century is to educate individuals in the best way so that they can become equipped citizens and cope with the problems they will face throughout their lives (Wegner, 2008). Also, higher education institutions aim to educate individuals to meet the needs of the industry and to provide economic and social development to increase national and international coherence and living standards based on democracy, tolerance and mutual respect in countries (Rao, 2003). In addition, these institutions aim to develop the responsibility of the learner in acquiring lifelong learning skills. In other words, lifelong learning skills should be developed in higher education institutions. In this way, personal skills and competencies can be developed in individuals to meet the needs of the society (Foo, 2013).

It has become a major pre-occupation for the colleges and vocational education training institutions to foster a culture of lifelong learning (Mwaikokesya, 2014). Within this concern, a memorandum was issued by the countries in Europe in 2000 and lifelong learning was considered as a guiding principle for provision and participation across the full continuum of learning contexts (CEC, 2000: 5). In accordance with this purpose, higher education institutions should integrate lifelong learning skills with their mission and strategy, provide education for a diversified student population, provide flexible and transparent learning paths for all learners to access and promote a flexible and creative learning environment for all students, provide appropriate guidance and counseling services, strengthen the relationship between research, teaching and innovation in a perspective of lifelong learning (Župarić, 2009). Therefore, higher education institutions should keep up with this period of change by organizing educational environments in this way.

Higher education institutions have also a great impact in Turkey in promoting the lifelong learning skills of the students. In Turkey, after graduating from high school, students can enroll in higher education, which is compatible with the Bologna three-cycle system.

Students have to enter a university entrance exam in order to be placed in higher education programs and to be placed according to their preferences by a central placement system (Council of Higher Education, 2020a). Universities organize various educational activities to promote lifelong learning. Within this scope, lifelong learning centers, which have a significant value among the units of universities providing services for the society, have been established. In the "Turkey's higher education strategy" report, which reflects lifelong learning strategy of universities published by The Council of Higher Education (YÖK), lifelong learning is emphasized (Council of Higher Education, 2020b). In addition, Soran et al. (2006) stated that after the 1950s, the function of community services was added to the teaching and research functions of universities, and emphasized that universities have played an important role in providing lifelong learning skills. Based on this, various studies examining lifelong learning tendencies of university students from various perspectives have been conducted, nevertheless they have contradictory findings. Brahmi (2007) explored medical students' perceptions of lifelong learning at Indiana University School of Medicine (IUSM). The results indicated that medical students across all four years consistently defined lifelong learning as continuing to learn, as keeping up with ever increasing new knowledge, and becoming a self-directed learner. Coşkun (2009) examined the perceptions of lifelong learning in higher education. Özdemir (2012) analysed the university students' perceptions about quality of school life in terms of gender and faculty department variables. The findings showed that students' perceptions about quality of school life differed significantly according to their gender and faculty departments. İzci and Koc (2012) explored the opinions of teacher candidates about lifelong learning and found that the opinions of teacher candidates about lifelong learning differed according to the field of study. Gencil (2013) examined the perceptions of teacher candidates about lifelong learning competences. The findings showed that perceptions of teacher candidates about lifelong learning competences differed in terms of field of study and gender variables. Beytekin and Kadi (2014) aimed at determining university students' lifelong learning tendencies and revealed that students' lifelong learning tendencies differed significantly according to gender and class level variables. Mwaikokesya (2014) examined how university students' personal and institutional experiences have changed and improved their capacity to be lifelong learning individuals. Tezer and Aynas (2018) examined the effects of university education on lifelong learning tendencies of teachers and preservice teachers in terms of different variables. Kaya (2020) investigated the lifelong learning tendency levels of university students concerning some variables.

Higher education is an important part of the formal school education and a key factor of lifelong education

system (Guo et al., 2012). A wide range of students with varying background and learning paths enter higher education institutions at different phases of their lives. Therefore, higher education institutions are required to respond more flexibly to individual learners' needs, which mean a shift from the traditional role of educating students (Cendon, 2018). In addition, the knowledge and skills gained through higher education help individuals throughout all their professional life (Buza et al., 2010). Lifelong learning skills prepare college students for their careers; make them more successful (McGarrah, 2015) and provide socio-cultural and professional development for them (Beytekin and Kadi, 2014). For this issue, De la Harpe and Radloff (2000) stated that for the realization of lifelong learning, university programs should be organized with activities where students can control their own learning, decide what and why they need for learning, and take responsibility for research.

The information presented in the literature make it clear that depending on the technological, socio-cultural and academic developments all over the world; lifelong learning tendency skill has become one of the core elements that each individual should have. In addition, the studies indicate that higher education institutions have an important function in developing lifelong learning skills. Therefore, it is required to focus on and conduct studies with different variables while investigating university students' lifelong learning tendency levels. Based on this, it is important to examine the lifelong learning tendencies of university students and to determine the factors affecting lifelong learning tendencies of students in order to reveal whether the universities can be successful in helping students acquire lifelong learning skills. The findings of this study can provide a sample for the policy makers and teachers at universities in terms of setting goals and expectations to foster lifelong learning skills of the students, to develop and strengthen existing resources, to support lifelong learning skill services at universities. Therefore, it is thought that an important contribution can be made to the literature by this study.

### Research questions

The research questions of the study are as follow:

1. What is the level of lifelong learning tendencies of university students?
2. Do the levels of university students' lifelong learning tendency differ significantly according to gender variable?
3. Do the levels of university students' lifelong learning tendency differ significantly according to grade variable?
4. Do the levels of university students' lifelong learning tendency differ significantly according to following developments in information and communication technologies variable?

5. Do the levels of university students' lifelong learning tendency differ significantly according to faculty variable?
6. Do the levels of university students' lifelong learning tendency differ significantly according to participation in activities such as conferences, panels, symposiums etc. held at the university variable?

### METHOD

This section provides information about the model of the study, the sample of the study, the data collection tool and data analysis employed.

#### Research model

In the study, the survey method was employed. Survey models are used to describe, compare, analyze and interpret the situations of individuals, institutions, groups or sources in the way that they are (Cohen et al., 2007). Based on this, in this study it was aimed to determine whether lifelong learning tendency level of the university students (dependent variable) differ significantly in terms of gender, grade, following developments in information and communication technologies, faculty and participation in activities such as conferences, panels, symposiums etc. held at the university variables (which are the independent variables in the study).

#### Study group

The sample of the study consisted of 500 students studying at various undergraduate programs at a state university in Turkey during 2018-2019 academic year. Of these students, 214 were female and 286 were male. In the literature, it is stated that there are various gender related differences in the school environment, which affect the success. Ready et al. (2005) stated that female students tend to enter school with several more advantages than male students, including better literacy skills and more positive social behaviors. Gencil (2013) indicated that women generally face such circumstances as leaving jobs, starting new profession and adaptation. Therefore, they tend to have positive tendencies for lifelong learning compared to males. Within this scope, in the study gender variable was considered as a significant variable that can lead to differences in terms of lifelong learning tendencies of the students. On the other hand, 225 of the students were the 1st-year and 275 were 4th-year students. Deveci (2014) indicated that there is a positive correlation between the number of years spent at university and lifelong learning aptitude. Similarly, Kirby et al. (2010) stated that the senior students tended to have higher scores for application of knowledge and skills. Therefore, it is concluded that students gain

experiences in the college life and when they get more experience, their lifelong learning skill can increase. 1st-year students have no experience about college life. However, 4th-year students have college life experience. Students can enrich their college experiences by engaging in the activities in college. Therefore, in this study, only 1st-year and 4th-year students were selected to examine whether the experiences of the students during college life make a significant difference in their lifelong learning tendencies. In addition, of these students, 209 were studying at the Faculty of Science and Letters (FSL), 181 were studying at the Faculty of Economics and Administrative Sciences (FEAS) and 110 were studying at the Faculty of Engineering (FE).

Faculty of Engineering aims to train engineers who will serve the society by authentic contribution in the science of engineering and technology. In the FE, which has a 4-year education program, certain objectives such as improving the society, conducting scientific research and revealing the professional skills of the students are realized. Faculty of Science and Letters gives education in basic and applied sciences. It provides courses such as Physics, Chemistry, Mathematics, Biology in the field of science; and courses such as Turkish Language, History, Sociology, Psychology in the social field, for all the programs of the university. The Faculty of Economics and Administrative Sciences (FEAS) is a faculty that trains individuals who will meet the needs of the society for administrative and qualified personnel. As can be understood, these three faculties have different aims. In the study, it is also aimed to diversify the sample of the study by selecting students from three different faculties. In addition, the focus of these faculties is different from each other. In each faculty, different classes are taught. On the other hand, in the faculty of engineering most of the students were male since it consisted of electricity engineering, computer engineering and machinery engineering programs. On the contrary, in the Faculty of Economics and Administrative Sciences, most of the students were female. So, in order to have a balanced distribution in terms of gender variable and to examine whether the faculty variable has a significant effect on the lifelong learning tendencies of the students, students studying at three different faculties were selected.

In the study, it was aimed to reach all 1st-year and 4th-year students studying at these three different faculties. However, volunteering was taken as a basis and some students stated that they did not want to take part in the study. In addition, it was seen that some of the students did not answer all the items in the scale form. Therefore, incomplete forms were excluded from the study.

### Data collection tool

In the study, the personal information form was prepared by the researchers to collect data on gender, grade, following developments in information and

communication technologies, faculty and participation in activities such as conferences, panels, symposiums etc. held at the university. In addition, the "Lifelong Learning Tendency Scale (LLTS)" developed by Coşkun and Demirel (2010) by conducting validity and reliability studies was used to find the answers to the problems of this study. In the scale development process, the researchers conducted content validity and construct validity. The validity and credibility of this measurement tool has realized on 2100 individuals as a mixture of 600 pilots and 1500 actual implementation. An initial item pool consisting of 94 items was generated. The items were reduced to 74 after expert opinions. Basic components analysis was employed for the factor analysis. Kaiser-Meyer-Olkin (KMO) coefficient as well as Barlett test was used. The factor analysis was applied on the 74-item trial form. As a result of the factor analysis, some items were removed from the scale, and reliability study was performed for 34 items with factor load of 20 and above. In addition, total correlations were calculated for each item, and Cronbach alpha internal consistency of the ultimate 27-item scale was found to be .89. Following the analyses, the ultimate scale with 27 items and four sub-dimensions was reached.

The scale consists of 27 items as a six-point Likert-type instrument, ranging from "completely suits" to "never suits". The scale consists of four dimensions, namely "Motivation (6 items)", "Perseverance (6 items)", "Lack of self-regulation (6 items)" and "Lack of curiosity (9 items)". The items between 1 and 6 are related to motivation dimension, 7-12 are related to Perseverance, 13-18 are related to lack of self-regulation and the rest of the items are related to the lack of curiosity dimension.

Motivation dimension is about desire for learning new things and acquiring new skills. McCombs (1991) emphasized that "the motivated person is a lifelong learner and the lifelong learner is a motivated person". Pires (2009) stated that lifelong learning, which constitutes the long-term motivation and consciousness, cannot be separated from individuals' motivational dynamics. Perseverance dimension includes such as being more eager than their friends to learn new knowledge and skills, spending time doing research to learn, creating opportunities to learn new information even if they are intense, and trying to learn in the best way. Curiosity is defined as "a desire to know or learn, to inquire and seek knowledge" (Hanshaw-King, 2004). Items related to lack of curiosity dimension includes items indicating that students do not want to waste their time by doing research. They prefer to spend time with their loved ones instead of spending time for their personal development and they consider libraries as boring places. Motivation dimension includes items such as acquiring new knowledge and skills in different fields to improve themselves and learning all kinds of information for their personal development. Lastly, lack of self-regulation dimension consists of items indicating that students do not give importance to gain new knowledge and skills just

to ensure their personal development and they do not use information sources (books, internet, etc.) related to their profession, except for compulsory cases.

A high score in motivation and perseverance dimensions indicates a high lifelong learning tendency, while a low level indicates a low lifelong - learning tendency. However, a high score in lack of curiosity and lack of self-regulation dimensions indicate that lifelong learning tendency is low. In addition, a low overall score obtained from the scale indicates low tendency level.

The Cronbach Alpha reliability coefficient of the scale was found to be 0.89. In the current study; reliability coefficients related to the dimensions of the scale were found as follows: .81 for the motivation dimension, .79 for the perseverance dimension, .68 for the lack of self-regulation dimension, and .73 for the lack of curiosity dimension. The reliability coefficient for the whole scale was calculated as .60. Cronbach alpha is used frequently in likert type scales. Büyüköztürk (2016) stated that a value below .70 is acceptable for internal reliability. On the other hand, Ghazali (2008; Cited in: Mohamad et al., 2015) suggested that in social science, the acceptable  $\alpha$  value is .60. Similarly, Uzunsakal and Yıldız (2018) stated that Cronbach Alpha value in the range of  $0.60 < R^2 < 0.80$  is acceptable. Therefore, the data collection tool used in the study was considered as reliable.

## Data analysis

The quantitative data were transferred to the computer environment and later analyzed. Firstly, descriptive statistics such as frequencies, means, and standard deviations were computed to display the students' overall responses to the lifelong learning tendency scale items. Secondly, t-test was conducted in order to determine whether there were any significant differences in gender, grade and following developments in information and communication technologies variables. One-way ANOVA was conducted to investigate whether there were any differences in lifelong learning tendencies of students in terms of faculty and participation in activities such as conferences, panels, symposiums etc. held at the university variables.

## FINDINGS

The findings obtained within the scope of the study are presented in accordance with the sub-problems of the study.

### Lifelong learning tendencies of university students

The findings of the quantitative data obtained in order to determine the lifelong learning tendencies of the students are given in Table 1.

**Table 1.** Mean and standard deviation scores for lifelong learning tendencies of the students.

Dimensions	$\bar{X}$	SS
Motivation	2.06	0.77
Perseverance	2.43	0.82
Lack of self-regulation	4.68	0.93
Lack of curiosity	4.54	0.83
Total score	3.55	0.39

As seen in Table 1, the mean score of *motivation* dimension ( $\bar{X} = 2.06$ ) and the mean score of *perseverance* dimension ( $\bar{X} = 2.43$ ) obtained from the scale were at a low level, indicating "somewhat does not suit me" interval. On the other hand, the mean score of *lack of self-regulation* dimension ( $\bar{X} = 4.68$ ) and the mean score of *lack of curiosity* dimension ( $\bar{X} = 4.54$ ) were at a moderate level, indicating "somewhat suits me" interval. When the *total score* obtained from the scale is examined, it is seen that students' lifelong learning tendencies level was at a moderate level ( $\bar{X} = 3.55$ ), indicating "somewhat does not suit me" interval.

### University students' lifelong learning tendency levels according to gender variable

Another aim of the study was to determine whether students' lifelong learning tendencies differed according to various variables. Independent sample t-test was utilized to see whether the students' lifelong learning tendencies differ in terms of gender variable. The t-test results are shown in Table 2.

According to the Table 2, no significant difference was found in the *perseverance* dimension according to gender variable [ $p > 0.05$ ], while a significant difference was found in the *motivation* dimension [ $t = -2.3, p < 0.05$ ] in favor of male students, and in the *lack of self-regulation* [ $t = 3.1, p < 0.05$ ], *lack of curiosity* [ $t = 3.7, p < 0.05$ ] dimensions and the total score [ $t = 2.4, p < 0.05$ ] in favor of female students.

### University students' lifelong learning tendency levels according to grade variable

The results of independent samples t-test performed to determine whether the scores obtained by the students regarding their levels of lifelong learning tendency differed significantly according to grade variable are presented in Table 3.

According to Table 3, while no difference was found in the *lack of curiosity* dimension and *total score* in terms of grade variable [ $p > 0.05$ ], a significant difference was

**Table 2.** Independent samples t-test results for gender variable.

Dimensions	Gender	N	X	SS	T	p
1. Motivation	Female	214	1.99	.65	-2.3	.02
	Male	286	2.13	.88		
2. Perseverance	Female	214	2.38	.76	-1.5	.11
	Male	286	2.49	.87		
3. Lack of self-regulation	Female	214	4.80	.88	3.1	.00
	Male	286	4.56	.96		
4. Lack of curiosity	Female	214	4.67	.76	3.7	.00
	Male	286	4.42	.87		
5. Total score	Female	214	3.59	.39	2.4	.01
	Male	286	3.51	.38		

**Table 3.** Independent samples t-test results for grade variable.

Dimensions	Grade	N	X	SS	t	p
Motivation	1st-Year	225	2.14	.85	2.4	.01
	4th-Year	275	1.98	.69		
Perseverance	1st-Year	225	2.52	.84	2.4	.01
	4th-Year	275	2.35	.79		
Lack of self-regulation	1st-Year	225	4.58	.93	-2.4	.01
	4th-Year	275	4.77	.92		
Lack of curiosity	1st-Year	225	4.52	.84	-.06	.51
	4th-Year	275	4.57	.81		
Total score	1st-Year	225	3.56	.39	.42	.67
	4th-Year	275	3.55	.40		

found in the *motivation* [ $t = 2.4, p < 0.05$ ] and *perseverance* [ $t = 2.4, p < 0.05$ ] dimensions in favor of 1st-year students, and in the *lack of self-regulation* dimension [ $t = -2.4, p < 0.05$ ] in favor of 4th-year students.

#### University students' lifelong learning tendency levels according to following developments in information and communication technologies variable

Table 4 includes independent samples t-test results regarding the comparison of the scores obtained from the scale according to the following developments in information and communication technologies variable.

As can be seen in Table 4, while there was no significant difference in the *perseverance* and *lack of self-*

*regulation* dimensions according to the following developments in information and communication technologies variable [ $p > 0.05$ ], significant differences were found in the *motivation* dimension [ $t = -2.2, p < 0.05$ ] and total score [ $t = -4.7, p < 0.05$ ] in favor of the students who do not follow developments in information and communication technologies, and in the *lack of curiosity* dimension [ $t = -2.9, p < 0.05$ ] in favor of the students who follow developments in information and communication technologies.

#### University students' lifelong learning tendency levels according to faculty variable

Table 5 presents ANOVA analysis results regarding the comparison of the scores obtained from the dimensions

**Table 4.** Independent samples t-test results.

Dimensions	Following developments	N	X	SS	t	p
Motivation	Yes	310	2.00	.80	-2.2	.02
	No	190	2.15	.72		
Perseverance	Yes	310	2.39	.80	-1.6	.10
	No	190	2.50	.84		
Lack of self-regulation	Yes	310	4.63	.93	-1.7	.08
	No	290	4.76	.93		
Lack of curiosity	Yes	310	4.67	.77	-2.9	.00
	No	190	4.47	.85		
Total score	Yes	310	3.49	.40	-4.7	.00
	No	190	3.65	.36		

of the scale according to the faculties that students study at.

As seen in Table 5, while the levels of students' lifelong learning tendency did not differ in *motivation* and *perseverance* dimensions [ $p > .05$ ], significant differences were found in scores in relation to the *lack of self-regulation* [ $F(3-497) = 4.22, p < .05$ ], *lack of curiosity* [ $F$

(3-497) = 9.72,  $p < .05$ ], and *total score* [ $F(3-497) = 5.58, p < .05$ ] dimensions. When the source of the difference in the *lack of self-regulation* and *lack of curiosity* dimensions, and *total score* was examined, it was determined that the scores of the students of the FE were lower than the students who were studying at the FEAS and FSL.

**Table 5.** One-Way ANOVA results for faculty variable.

Dimensions	Faculty	n	X	SS	Var. K.	K.T.	SD	K.O.	F	p
Motivation	FSL	209	2.09	.76	Between G.	2.645	3	1.32	2.18	.11
	FE	110	2.15	.93	Within G.	342.494	497	.60		
	FEAS	181	1.98	.68	Total	345.139	499			
	Total	500	2.06	.77						
Perseverance	FSL	209	2.45	.81	Between G.	1.899	3	.94	1.40	.24
	FE	110	2.51	.85	Within G.	384.536	497	.67		
	FEAS	181	2.36	.81	Total	386.435	499			
	Total	500	2.43	.82						
Lack of self-regulation	FSL	209	4.73	.96	Between G.	7.338	3	3.66	4.22	.01
	FE	110	4.46	.87	Within G.	491.909	497	.86		
	FEAS	181	4.74	.92	Total	499.247	499			
	Total	500	4.68	.93						
Lack of curiosity	FSL	209	4.58	.83	Between G.	13.011	3	6.50	9.72	.00
	FE	110	4.26	.84	Within G.	379.266	497	.66		
	FEAS	181	4.66	.78	Total	392.277	499			
	Total	500	4.54	.83						
Total score	FSL	209	3.59	.41	Between G.	1.727	3	.86	5.58	.00
	FE	110	3.45	.37	Within G.	87.692	497	.15		
	FEAS	181	3.57	.38	Total	89.419	499			
	Total	500	3.55	.39						

### University students' lifelong learning tendency levels according to participation in conferences, panels, and symposiums etc. held at the university variable

Table 6 shows the ANOVA results regarding the comparison of the scores obtained from the scale according to participation in conferences, panels, symposiums etc. held at the university variable.

According to Table 6, the levels of students' lifelong learning tendency scores differed significantly in all dimensions of the scale except for the *total score*. When the source of difference regarding *motivation* and *perseverance* dimensions was examined, it was seen

that the scores of the students who did not participate in activities such as conferences, panels and symposiums etc. held at the university were higher compared to those who participated. As for the difference in the *lack of self-regulation* and *lack of curiosity* dimensions, it was seen that the scores of the students who participated in activities such as conferences, panel and symposiums etc. held at the university were higher than those who did not participate in these activities, and that the scores of students who sometimes participated in these activities were higher in comparison to the scores of those who never participated.

**Table 6.** One-Way ANOVA results for participation in conferences, panels, symposiums etc. held at the university variable.

Dimensions	Participation Level	n	X	SS	Var. K.	K.T.	SD	K.O.	F	p
Motivation	Yes	126	1.86	.73	Between G.	21.163	3	10.58	18.51	.00
	No	85	2.46	.93	Within G.	323.976	497	.57		
	Sometimes	289	2.03	.70	Total	345.139	499			
	Total	500	2.06	.77						
Perseverance	Yes	126	2.15	.75	Between G.	26.264	3	13.13	20.67	.00
	No	85	2.83	.93	Within G.	360.171	497	.63		
	Sometimes	289	2.44	.77	Total	386.435	499			
	Total	500	2.43	.82						
Lack of self-regulation	Yes	126	4.80	.89	Between G.	12.521	3	6.26	7.29	.00
	No	85	4.36	.95	Within G.	486.726	497	.85		
	Sometimes	289	4.72	.93	Total	499.247	499			
	Total	500	4.68	.93						
Lack of curiosity	Yes	126	4.63	.81	Between G.	9.717	3	4.85	7.20	.00
	No	85	4.26	.82	Within G.	382.560	497	.67		
	Sometimes	289	4.59	.82	Total	392.277	499			
	Total	500	4.54	.83						
Total score	Yes	126	3.50	.43	Between G.	.46	3	.23	1.49	.22
	No	85	3.56	.32	Within G.	88.950	497	.15		
	Sometimes	289	3.57	.39	Total	89.419	499			
	Total	500	3.55	.39						

## DISCUSSION AND CONCLUSION

In this study, it was aimed to investigate lifelong learning tendencies of university students in terms of various variables. The findings of the study showed that lifelong learning tendencies of the university students differ significantly in terms of different variables. In line with the first sub-problem of the study, the levels of university students' lifelong learning tendency were determined. The mean score of motivation dimension and the mean

score of perseverance dimension obtained from the scale were at a low level, indicating "somewhat does not suit me" interval. Motivation is one of the most important factors affecting human behavior and performance and used to ensure success for students (Pintrich, 2003; Pintrich and Schunk, 2002). Lifelong learning requires motivation to complete learning projects across the lifespan. In lifelong learning process, motivated individuals are eager to learn, they search for new information and acquiring new skills (Coşkun and

Demirel, 2012). Therefore, it can be said that students are motivated to learn at a moderate level. In the classroom environment, students should be provided project works that necessitates students to find practical solutions, be allowed to choose the topics that they are interested in, and the activities and the learning environment should be designed in a way to increase their motivation, which will also increase their lifelong learning tendencies. Perseverance in lifelong learning tendency refers to being determined in learning process (Pintrich and Schunk, 2002). Perseverance is defined as the ability to focus on the success of achieving the goal in the face of any obstacle, hopelessness or contradictory situations in learning, and to show resistance to maintaining it (Coşkun and Demirel, 2012). In the perseverance dimension, it can be said that students' lifelong learning tendencies are at a moderate level in terms being more eager than their friends to learn new knowledge and skills, spending time doing research to learn, creating opportunities to learn new information even if they are intense, and trying to learn in the best way. It is required to boost students' perseverance skill in particular, so that learning can become lifelong (Baxendell, 2007; Cited in; Deveci, 2014). For this, teachers should know students' interests, achievements and failures. In addition, when students know their instructors in person, they will trust more, and both parties will feel respected and cared for. As a result, students will be more encouraged to persist in the face of difficulties (Barseghian, 2013). As can be understood, teachers should try to learn more about the students and they should be a mutual relationship between two parties based on trust and respect.

On the other hand, the mean score of lack of self-regulation dimension and the mean score of lack of curiosity dimension were at a moderate level, indicating "somewhat suits me" interval. Curiosity is defined as a desire to learn. Curious learners want to learn more about the environment. They examine the environment well; they insist on learning, they search for acquiring new information (Coşkun and Demirel, 2012). On the other hand, self-regulation is another factor which is directly related to lifelong learning. Self-regulation is to control the learning process, take the responsibility in learning (Smith, 2001). For this reason, students were found to be at a moderate level in terms of doing research, giving importance to their personal development, completing their deficiencies, not to considering the participation in courses and seminars as a waste of time, and constantly learning new knowledge and skills. When the total mean score obtained from the scale was examined, it was seen that students' lifelong learning tendencies level was at a moderate level, indicating "somewhat does not suit me" interval. According to the results, lifelong learning tendencies of university students were found to be at a moderate level. Based on the findings, it is thought that university

students are open to learning and their motivation levels for learning at a moderate level. This result shows similarity with some studies in the literature (Aksoy et al., 2017; Gencel, 2013; Pesen and Epcacan, 2017; Pilli et al., 2017). On the contrary, Coşkun (2009) and Coşkun and Demirel (2012) found that lifelong learning tendencies of university students were at low level. As seen, there are differences in the findings of the various studies in the literature. It can be said that due to the differences between participants on which the scale was applied and the various factors which affect the lifelong learning tendencies play a role obtaining different findings.

When the total scores of lifelong learning tendencies of university students according to gender were examined in the study, no significant difference was found in the perseverance dimension according to gender variable. Therefore, it can be said that female and male students participated in the study are willing to learn new things, want to acquire new skills, try to learn in a best way, create opportunities to learn at similar levels. On the contrary, it was seen that lifelong learning tendencies of female students were higher than male students in terms of motivation, lack of self-regulation and lack of curiosity dimensions. Based on this, female students were found to be more enthusiastic and motivated to learn than male students. On the contrary, lack of self-regulation and lack of curiosity dimensions are reversed. As a result, the fact that the scores of female students were higher than male students indicates that lifelong learning tendencies of female students were lower than male students in these dimensions. As a result, male students were better than female students in terms of making researches, giving importance to self-development. In addition, it can be said that male students were better than female students in terms of controlling their own learning process. When the lifelong learning tendencies of the students are examined in terms of mean scores, a significant difference was obtained in favor of female students. In this context, it can be said that female students are more willing to learn new knowledge and skills, are more open to innovations, and make more efforts in the lifelong learning process compared to male students. Similarly, Coşkun (2009), Gencel (2013) and Aksoy et al. (2017) stated that females' lifelong learning competencies are more positive than males. Dindar and Bayrakçı (2015) obtained that gender variable didn't lead any changes among lifelong learner profiles of students in general, except the dimension "curiosity" in which female students with higher points differ significantly from male students. Yılmaz (2018) found that gender factor was not effective on lifelong learning tendencies of the university students. On the contrary, Beytekin and Kadi (2014) found that male students had higher lifelong learning tendency points than female students. As seen, gender variable is a significant variable which has an impact on students' lifelong learning tendencies.

When the lifelong learning tendencies of university students according to the grade were examined, there was a significant difference in the motivation and perseverance dimensions in favor of 1st-year students. Therefore, it can be said that 1st-year students are more willing and motivated to learn and try more to acquire new skills than 4th-year students. On the other hand, in the lack of self-regulation dimension, there was a significant difference in favor of 4th-year students. Since this dimension was reversed, it is interpreted that 1st-year students were better than 4th-year students in terms of controlling their learning process. Similarly, Beytekin and Kadi (2014) found that 2nd-year students had higher lifelong learning tendency points than 4th-year students. In the study conducted by Tunca et al. (2015), it was determined that the 2nd-year preservice teachers had higher mean scores in motivation dimension than the 4th-year students. In the study conducted by Gökyer and Türkoğlu (2018), in the perseverance dimension, it was concluded that 4th-year students had a lower mean score than other students in other grades. In the study conducted by Coşkun (2009), no significant difference was found between the mean scores that the university students received from the scale in terms of grade variable. Similarly, in the study conducted by Dindar and Bayrakçı (2015), there was no significant difference between the mean scores of the students in terms of grade variable. Based on these findings, it can be concluded that when students get more experiences at school, their lifelong learning tendencies differ and decrease.

When the findings regarding the differentiation of the levels of students' lifelong learning tendency according to the variable of following developments in information and communication technologies were examined, a significant difference was found in the motivation dimension and total score in favor of students who did not follow developments in information and communication technologies, and in the lack of curiosity dimension in favor of students who followed developments in information and communication technologies. In other words, it was seen that lifelong learning tendencies of students who did not follow developments in information and communication technologies were more than the students who followed developments in information and communication technologies in terms of motivation, lack of curiosity dimensions and total mean score. Therefore, it can be said that, when students do not follow developments in information and communication technologies they are more motivated to learn new things and are open to new information. In addition, they want to learn new information from different sources. Based on this finding, it can be concluded that when students follow developments in information and communication technologies, their lifelong learning tendencies decrease. Normally, students' lifelong learning tendencies are expected to be high when they follow developments in

information and communication technologies. However, in this study a different finding was obtained, which can be resulted from the context of the study and the characteristics of the participants. In addition, it may be possible that students participating in the study follow developments in information and communication technologies slightly; however they answered as yes to the question "Do you follow developments in information and communication technologies?" Therefore, it can be argued that students should follow the developments effectively and in line with specific purposes.

When the findings related to the differentiation of the levels of students' lifelong learning tendency according to the faculty were examined, it was seen that there was no difference in motivation and perseverance dimensions. Therefore, it can be said that students' lifelong learning tendencies are similar in terms of motivation and perseverance. On the other hand, there was a significant difference in the dimensions of lack of self-regulation, lack of curiosity and the total mean score. When the source of the difference in the related dimensions was examined, it was determined that the scores of the students of the FE were lower than the students who were studying in the FEAS and FSL. Similarly, in the study conducted by Coşkun (2009), significant differences were observed when the scores of university students according to the faculty variable were examined. As a result, it can be seen that students studying at different faculties have different lifelong learning tendency levels in terms of lack of self-regulation and lack of curiosity. As a result, it is seen that faculty is a significant variable which affects the lifelong learning tendencies of university students. This may be caused by different cultures and climates of the faculties.

When the findings regarding the difference in the levels of students' lifelong learning tendency according to the level of participating in activities such as conferences, panels and symposiums, etc. held at the university were examined, it was seen that the levels of students' lifelong learning tendency scores differed significantly in all dimensions of the scale except for the total score. When the source of difference regarding motivation and perseverance dimensions was examined, it was seen that the scores of the students who did not participate in activities such as conferences, panels and symposiums etc. held at the university were higher compared to those who participated, and that the scores of the students who sometimes participated in such activities were higher in comparison to those who never participated. As for the difference in the lack of self-regulation and lack of curiosity dimensions, it was seen that the scores of the students who participated in activities such as conferences, panel and symposiums etc. held at the university were higher than those who did not participate in these activities, and that the scores of students who sometimes participated in these activities were higher in comparison to the scores of those who never

participated. As the lack of self-regulation and lack of curiosity dimensions are reversed, it is interpreted as that the scores of the students who did not participate in activities such as conferences, panels and symposiums etc. held at the university were higher compared to those who participated, and that the scores of the students who sometimes participated in such activities were higher in comparison to those who never participated in terms of these dimensions. Therefore, it can be concluded that participating in activities such as conferences, panels and symposiums etc. held at the university is not a significant difference affecting their lifelong learning tendencies. Normally, it is expected that students will have higher level of lifelong learning skill when they participate in activities such as panels, conferences. However, in this study an opposite finding was obtained. This may be caused by the context of the study and the characteristics of the participants. On the other hand, no significant difference was obtained in terms of total mean score. Therefore, it can be concluded that although participating in activities such as conferences, panels and symposiums, etc. held at the university affect students' lifelong learning tendencies when considered in terms of each dimension, it is not a significant variable in terms of total mean score. In the study conducted by Ayaz (2016), the lifelong learning tendencies of the teachers who wanted to participate in personal and professional development activities such as courses, seminars and symposiums were found to be higher. In the study carried out by Atacanlı (2007), it was determined that the willingness to participate in personal and professional development activities increased the level of lifelong learning tendency or those with high level of lifelong learning tendency were more willing to take part in such activities, and that such activities were important factors in the process of lifelong learning.

In conclusion, in the current study, it was obtained that lifelong learning tendency level of university students were found to be at a moderate level and differ significantly in terms of gender, grade, following developments in information and communication technologies, faculty and participating in activities such as conferences, panels and symposiums, etc. held at the university variables. The 21<sup>st</sup> century that we live in is defined as the age of information and technology. Rapid changes and developments in information and communication technologies have increased the importance of life-long learning skills. Acquiring life-long learning skills is also an important issue for university students. Therefore, it has a great value to increase their lifelong learning tendency levels. For this, conferences should be held in universities, some social programs should be conducted and teachers should support students to acquire various lifelong learning skills. In addition, in the teaching and learning process, lifelong learning tendencies of the students should be dealt with intensely and teachers should make an effort to increase lifelong learning skills of their students. For students to

acquire lifelong learning skill, they should be provided with the appropriate environment, and should be able to access the required recourses easily and use them effectively in order to increase their lifelong learning skills.

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