Investigation of Primary School Teachers' Lifelong Learning Dispositions and Technological Competencies

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Article Info	Abstract
	It is thought that it is significant to investigate to what extent teachers have educational technology competencies, to what extent they can improve themselves and to what extent they have lifelong learning skills. In this context, lifelong learning dispositions and technological competencies of primary school teachers were examined in this study with a comparative and relational approach in terms of some variables. The study, in which quantitative research methods were employed, was conducted on 270 primary school teachers working in different cities in Kazakhstan. Lifelong learning dispositions and technological competence perception scales were used to collect the research data. According to the findings of the study, lifelong learning dispositions and technological competencies of primary school teachers were found to be at medium level. Lifelong learning dispositions and technological competencies of primary school teachers differ significantly according to gender and age variables. Finally, a significant and positive relationship was found between lifelong learning dispositions and technological competencies of primary school teachers.

Introduction

Teachers' lifelong learning can be defined as teachers' continuous learning dispositions throughout their lives. It is important for teachers to have lifelong learning competencies because they are considered as individuals who shape the life of society. It has been found that teachers generally have high lifelong learning dispositions (Aspin & Chapman, 2000). Lifelong learning can be defined as a process that increases the knowledge and skills individuals gain throughout their lives and enables them to apply them in life (Fischer, 2000; Rausch, 2003). Lifelong learning can also be characterized as a learning that extends to every stage of our lives, where we can renew our knowledge and skills. The structure of lifelong learning is defined as a pedagogical framework that emphasizes the characteristics of education. In order to become a part of the society, education system and technological developments and to contribute to this learning society, teachers need to have some characteristics as lifelong learners (Adams, 2007; Choi & Woonsun, 2014; Finsterwald et al., 2013).

Lifelong learning, also called lifelong learning, is defined as "all learning activities undertaken throughout life to

develop knowledge, skills and competences from a personal, social, community, social and/or employment-related perspective" (A Memorandum on Lifelong Learning, 2000). Lifelong learning includes formal learning, non-formal learning, vocational education, technical education, in-service and out-of-service education and training. Lifelong learning removes restrictions on place, time, age, socio-economic status, educational level, etc. and offers equal opportunities to every individual (Dinevski&Dinevski, 2004). Lifelong learning is never an alternative to the education offered in educational institutions. However, we can argue that it contributes to the completion of knowledge deficiencies in the implementation of teaching tasks and to the addition of new knowledge and the development of existing knowledge.

Teachers, who have a crucial role in educational services, should have a solid world view based on contemporary ideas and a consistent and balanced personality. In addition to being a good model for learners in the process of lifelong learning, the teacher should be a very strong source of motivation in the learning process. Most of the time, students pay more attention to the teacher's approach to the subject and are influenced by the way he/she interprets events rather than the subject he/she teaches. Teachers' personality traits directly affect their planning, implementation and evaluation of teaching activities (Parkinson, 1999). Litzinger, Wise, Lee, and Bjorklund (2003) emphasized that lifelong learning can take place in formal or informal ways and can be considered as self-directed learning no matter which way.

Technological developments have a direct impact on both the economy and the education system of a society (Alomari, 2023; Bagaric & Strucic, 2021; Ozturk, 2023; Peifer & Taasoobshirazi, 2022; Seyitoğulları & Yalçınsoy, 2016; Syafii, Santoso, & Hartono, 2021). In this case, it can be said that in today's age, it is important for individuals to follow the innovations and developments in educational technologies in order to keep up with the age. The effective use of technological elements in educational environments is extremely important for individuals to realize the impact of technology on daily life. It is thought that the use of educational technology elements in classrooms will raise awareness of individuals about technology from an early age. It is likely to say that the fact that individuals are constantly intertwined with technological elements will enable them to closely observe the developments and changes in technology and to grow up as individuals who are open to change by adapting to innovations. Therefore, the effective use of technology in teaching-learning environments helps individuals to become active and lifelong learners who can adapt to the information age. In this direction, today's classroom environments have turned into environments where technological tools, which have recently become a part of everyday life rather than a luxury, are used as effectively as textbooks (Aldunate & Nussbaum, 2013; Kearney et al., 2018). It is essential to investigate to what extent teachers have educational technology competencies, to what extent they can improve themselves and to what extent they have lifelong learning skills.

The use of technology in education is a tool to improve the quality of education and it is very important for teachers to have these competencies in order for technology to be an effective tool in education (Ge, Han, & Shen, 2018). A teacher with technology competence can enrich the learning environment with more effective teaching as well as knowing how and when to use technology (Markovac & Rogulja, 2009). When the studies on teachers' technology use competencies are examined, it is seen that as their positive attitudes and skills towards using instructional technologies increase, their frequency and willingness to use these technologies also increase. It is

known that teachers' technology competencies and relatedly their lesson planning skills are directly affected by their beliefs about technology integration (Lee & Lee, 2014).

According to Algozzine et al. (1999), technology competence is analyzed in two parts: basic technology competencies and advanced technology competencies. Basic technology competencies include entry-level skills related to basic computer operation and the use of a range of computer software that enable more effective use of computers in professional activities. Advanced technology competencies include higher-level skills related to the use of basic competencies in teaching, management, counseling and other professional activities (Algozzine et al., 1999). Therefore, basic technology competencies not only contribute to professional or instructional activities in schools but also form the basis for higher level technology competencies. In the related literature (Kruger, Hansen, & Smaldino, 2000; Algozzine et al., 1999), it is stated that the training of teachers and pre-service teachers in using computer technologies is very important. In other words, training teachers to acquire basic knowledge, skills and competencies will enable them to make more effective use of technological tools in learning-teaching environments.

Educators are seeking answers to questions such as how teachers should use technology; whether technology standards should be content-neutral or content-linked; and whether technology should be treated as a separate subject or tool. Attempts to integrate technology into the education system in schools have been the subject of various studies since the 1980s. For technology integration to be successful, trained personnel, access to software and hardware resources, appropriate teaching and assessment approaches, technical support, vision, necessary policies and set standards are needed (Roblyer, 2006). Despite the relative expansion in the use of Internet-based learning technologies, there are still numerous educators who have some weaknesses in the application of instructional methods used in educational technology. In this case, it can be said that they need an orientation towards the use of educational technologies and the development of lifelong learning skills to solve problems related to different teaching methods (Almerich et al., 2016; Masry-Herzalah & Dor-Haim, 2022; Knezek & Christensen, 2002; Russell, G., Finger, G., & Russell, 2000).

Technological competencies are not a standardized concept, but a current and permanent issue for educators in educational research due to its changing and dynamic nature. In this context, a number of studies have been conducted to determine the scope and standards of educators' technological competencies at national and international level (Baek & Sung, 2020; Barron et al., 2003; Burrows et al., 2021; Kessler, 2016; Mandal, 2018; Sam, 2011; Thomas &Knezek, 2008; Tondeur et al., 2017; Wei, Piaw& Kannan, 2017). Technology competence includes competencies for the use of educational technologies. It also includes the ability of teachers to select and use the appropriate technology for their field and to decide on the pedagogical suitability of the technologies used in learning environments (Koehler & Mishra, 2006; Wahyuni, Agustini & Ariadi, 2022). It is seen that studies on technological competence are mostly related to teachers' technological formation competencies (Masry-Herzalah & Dor-Haim, 2022). A teacher's belief in his/her own ability to have a positive impact on student learning is critical to his/her actual success or failure (Slutsky, 2016; Winner, 2012). With the integration of technology into education, it is stated that being able to successfully integrate these technologies into the classroom is an important task for teachers (Lee & Lee, 2014; Southall, 2012). At this point, teachers' educational technology competencies

emerge as an important concept. It is seen that teachers' technological competencies increase over time and they integrate technology into their lessons more and more (Ertmer, 2005; Levinz & Klieger, 2010). One of the main reasons why teachers are inadequate in technology integration is that they do not receive sufficient information in undergraduate education and lack of lifelong learning skills in service (Şahin, 2011; Şen & Yildiz Durak, 2022). For this reason, the importance of studies aimed at completing the competencies of prospective teachers and teachers and their deficiencies in technology, both in undergraduate education and in-service trainings, has been mentioned. Teachers' technological competencies and active use of technology have a positive effect on learning (Castañeda et al., 2022; Yuting, Adams & Lee, 2022).

It is of great importance to determine the lifelong learning competencies of today's primary school teachers who train the future generation and to determine which variables affect these competencies in order to increase their competencies for lifelong learning. When the studies conducted in the related literature are examined, it is seen that the studies conducted to reveal the lifelong learning competencies or characteristics of primary school teachers (Bozat, Bozat& Hursen, 2014; Day, 2002; Dupigny-Giroux, 2010; Klug et al, 2014; Schugurensky & Myers, 2003), but very few studies have examined the relationship between technology competence, technology use and similar factors (Feng & Jih-Lian, 2016; Issenberg, et al., 1999; Sharples, 2000) which are thought to be effective on lifelong learning. On the other hand, emphasizing the need to increase the number of studies focusing on lifelong learning skills in this context has revealed the necessity of conducting this study.

In this context, the main purpose of this study is to determine the relationship between lifelong learning competencies of primary school teachers, who will have an important role in the formation of our society with individuals who are equipped with knowledge appropriate to the requirements of the age, have high information literacy and lifelong learning competence, and demographic variables and technology competence. In line with this general purpose, answers to the following questions were sought:

a) How are primary school teachers' perceptions of their lifelong learning dispositions and technological competencies?

b) Do primary school teachers' perceptions of lifelong learning dispositions and technological competencies differ according to gender and age variables?

c) Is the relationship between primary school teachers' lifelong learning dispositions and technological competencies significant?

Method

Research Model

In this study, which aims to determine the views of primary school teachers on technology competencies and lifelong learning dispositions, methods suitable for single survey, relational survey and causal comparison models were applied together. The single survey model is a research model in which the individual situations of the variables that are the subject of the research are described. The correlational survey model is a research model used to determine whether there is a relationship between two variables (Creswell, 2012; Fraenkel & Wallen, 2011). Causal comparison is a research model used to determine whether the specified indicators differ according

to variables such as gender, educational status, and technological tools owned. In this context, trying to describe primary school teachers' views on technology competencies and lifelong learning dispositions is an approach specific to the single survey model. On the other hand, in cases where the relationship between various independent variables and the views on competencies and dispositions was questioned, relational survey methods were used, and causal comparative research methods were used to examine whether the scores differed according to the levels of the relevant independent variable.

"Simple random sampling method" was used to determine the study sample. In this method, all participants in the population are under the same conditions. Considering the "Theoretical Sample Sizes for Universes of Different Sizes" () chart, the required sample size from the universe with a 5% margin of error, 95% confidence interval and medium effect size was calculated as 265 people. While sampling from the population, $\alpha= .05$ significance and 5% error tolerance were taken into consideration. Considering the possible losses that may occur in the research, 295 primary school teachers were reached in the quantitative dimension. The questionnaire received feedback from 275 people. However, the rest of the study was conducted with 270 teachers after the extreme values and data that were not suitable for analysis were removed before starting the analysis. When the study group is analyzed in terms of gender distribution, it is seen that 43.70% of primary school teachers are male and 56.30% are female. The majority of the teachers in the research group were female. When the distribution of teachers according to age groups is examined; 30.37% of them are between the ages of 20-29, 26.67% between the ages of 30-39, 20.00% between the ages of 40-39 and 22.96% between the ages of 50 and above. When it was analyzed whether primary school teachers had received training on technology before, 60.40% of them answered yes and 39.60% answered no.

Data Collection Tool

"Lifelong Learning Dispositions" and technological competence perception scales were used as data collection tools in the study. After the research on lifelong learning and theoretical resources (Hargreaves, 2004; Jarvis, 2007; Laal, 2011; McCombs, 1991; Simmermon, 2009) were examined in detail by the researcher, an item pool of 50 items was created. As a result of the expert evaluations, the scale was finalized with 45 items that could be used for the pre-application. The scale was structured as a five-point Likert-type scale. In this five-point scale, the ratings were determined as completely agree (5), agree (4), partially agree (3), disagree (2) and strongly disagree (1). The 45-item Kazakh scale prepared for the pre-application was applied to 224 primary school teachers working in Kazakhstan. Principal Component Analysis and confirmatory factor analysis were used for factor analysis of the scale. As a result of the factor analysis, it was seen that the scale consisted of 10 factors with an eigenvalue above 1 and that the items in the last 9 factors were few and did not form a unity in meaning. Considering the scree plot graph, it was thought that the scale could be evaluated as one dimensional. The factor loadings of 25 items in the final scale ranged between .41 and .79. As a result of the principal components analysis applied in the first stage of the factor analysis study, one factor and 25 items with eigenvalues above 1 and explaining 47.86% of the total variance were obtained. Cronbach's Alpha Reliability Coefficient was calculated to determine the reliability of the 25-item scale with construct validity. Accordingly, the reliability coefficient of the scale was found to be .91. As a result of the factor analysis, the Cronbach's Alpha reliability coefficient of the

25-item scale was found to be .88.

Technology Competence Perception Scale

The data of this study were obtained with the "Self-Efficacy Perception Scale for Technology Integration" developed by Wang, Ertmer, and Newby (2004) and adapted into Kazakh by the researcher. The scale is graded on a 5-point Likert scale as "I can do it easily", "I can do it", "I can partially do it", "I cannot do it" and "I absolutely cannot do it". The scale has 19 items and two sub-dimensions. The first sub-dimension "Using Technology" includes the first 6 questions and consists of items related to teachers' knowledge and skills in using technological tools. The second sub-dimension, "Using Technology", consists of items related to teachers' ability to use computer technology in the next 13 questions. Cronbach's Alpha reliability coefficients of the Kazakh form of the scale were .86 for the "Using Technology" sub-dimension; .85 for the "Using Technology" sub-dimension; and .89 for the total scale.

Data Analysis Techniques

The data of this study were collected through the answers given to the questionnaire by teachers working at primary school level. The data obtained in the study were analyzed using SPSS 26.0 package program. It was determined whether there was a statistically significant difference between the demographic characteristics of the participants in the study and teachers' evaluations of technological competence and lifelong learning dispositions. Teachers' personal information was calculated with frequency and percentage values, and their technological competence level and lifelong learning dispositions were calculated with arithmetic averages and standard deviations of the scores obtained from the scale.

In order to determine the normal distribution of the data, skewness and kurtosis values were divided by their standard errors and histogram graphs were analyzed separately for each variable. When the skewness and kurtosis values of the data were divided by their standard errors, it was found that the values of both sub-dimensions and total scores were between -1.96 and +1.96. According to Tabachnick and Fidell (2013) and Das and Imon (2019), it can be said that the data in these value ranges show normal distribution. However, parametric tests were used to analyze the data.

Findings

It can be said that primary school teachers have a medium level of technological competence perception (see Table 1). Looking at the averages in terms of the sub-dimensions of technological competence, it is seen that the dimension of using technology has a high average. However, it is seen that the average of the dimension of making technology available is close to the dimension of using technology. In this respect, it can be said that primary school teachers have a moderate level of technological efficacy and that the partial high level of efficacy in using technology affects the general efficacy in relation to using technology.

Table 1. Descriptive Analysis of Primary School Teachers' Lifelong Learning Dispositions

	N	Minimum	Maximum	Mean	Std. Dev.
Using technology	270	1.00	5.00	3.37	1.05
Making Students Use Technology	270	1.00	5.00	3.03	1.19
Total Technological Competence	270	1.00	5.00	3.20	1.05

When Table 2 is examined, it is understood that the lifelong learning disposition scores of primary school teachers vary between 1.00 and 4.90 and the mean score is calculated as 3.30± (SD=0.60). According to the mean values obtained, it is understood that the lifelong learning dispositions of primary school teachers are at a medium level.

Table 2. Descriptive Analysis of Primary School Teachers' Technological Competencies

	N	Minimum	Maximum	Mean	Std. Dev.
Lifelong Learning Disposition	270	1.00	4.50	3.30	0.60

As seen in Table 3, female teachers' scores for using technology, making technology available and general technological competence are lower than their male colleagues. In other words, male teachers have a higher perception of technological competence in educational processes. This difference is statistically significant at $p < 0.05$ level. On the other hand, all male and female teachers think that they perceive moderate technological competence.

Table 3. t-test Analysis of Primary School Teachers' Technological Competencies according to their Gender

	Gender	N	Mean	Std. Dev.	t	p
Using technology	Female	152	3.26	0.97	-1.949	0.052
	Male	118	3.51	1.13		
Making Students Use Technology	Female	152	2.89	1.07	-2.237	0.026
	Male	118	3.21	1.31		
Total Technological Competence	Female	152	3.07	0.95	-2.235	0.026
	Male	118	3.36	1.16		

As seen in Table 4, female teachers' lifelong learning disposition scores are lower than their male colleagues. In other words, male teachers have a higher lifelong learning disposition. This difference is statistically significant at $p < 0.05$ level. On the other hand, it is seen that male teachers have a high level of technological competence perception and female teachers have a medium level of technological competence perception.

Table 4. t-test Analysis of Primary School Teachers' Lifelong Learning Dispositions according to their Gender

	Gender	N	Mean	Std. Dev.	t	P
Lifelong Learning Disposition	Female	152	3.20	0.62	-3.151	0.002
	Male	118	3.43	0.55		

In Table 5, the technological competence perceptions of primary school teachers according to their age groups

were compared according to the One-Way Analysis of Variance technique. According to the data in the table, teachers aged 50 and above have the lowest technological competence. Teachers between the ages of 20-29 have relatively the highest perception of technological competence. It is seen that the perception of technological competence decreases as the age group of the research sample increases. Tukey test, one of the post-hoc tests, was also applied to test whether there was a difference between the groups and it was observed that there was a significant difference.

Table 5. F test Analysis of Primary School Teachers' Technological Competencies according to their Age

		N	Mean	F	p
Using technology	20-29	82	3.48	3.000	0.031
	30-39	72	3.6		
	40-49	54	3.32		
	50 and over	62	3.07		
	Total	270	3.37		
Making Students Use Technology	20-29	82	3.36	6.315	0.000
	30-39	72	3.11		
	40-49	54	3.00		
	50 and over	62	2.52		
	Total	270	3.03		
Total Technological Competence	20-29	82	3.43	4.753	0.003
	30-39	72	3.36		
	40-49	54	3.16		
	50 and over	62	2.80		
	Total	270	3.20		

In Table 6, lifelong learning dispositions of primary school teachers according to their age groups were compared according to the One-Way Analysis of Variance technique. According to the data in the table, teachers aged 50 and above have the lowest lifelong learning disposition. Teachers between the ages of 20-29 have relatively the highest lifelong learning perception. In the study, it was observed that teachers in the lower age group had a high lifelong learning disposition. Tukey test, one of the post-hoc tests, was also applied to test whether there was a difference between the groups and it was observed that there was a significant difference.

Table 6. F Test Analysis of Primary School Teachers' Technological Competencies according to their Age

		N	Mean	F	p
Lifelong Learning Disposition	20-29	82	3.46	5.027	0.002
	30-39	72	3.26		
	40-49	54	3.37		
	50 and over	62	3.09		
	Total	270	3.30		

According to the results of the correlation analysis, there is a significant relationship between the current use of technology and the use of technology (see Table 7). Accordingly, there is a positive relationship between the two variables (r= 0.777, p≤.001). This coefficient shows that there is a very high relationship between primary school teachers' technology use competence and technology enabling behaviors. A positive relationship (r= 0.474, p≤.001) was measured between teachers' general technological competencies and their lifelong learning dispositions. This coefficient shows that there is a high level and positive relationship between primary school teachers' technological competencies and their lifelong learning dispositions.

Table 7. Correlation Test Analysis of Primary School Teachers' Lifelong Learning Dispositions and Technological Competencies

		Using technology	Making Students Use Technology	Total Technological Competence	Lifelong Learning Disposition
Using technology	Pearson Correlation	1	.771**	.930**	.500**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	270	270	270	270
Making Students Use Technology	Pearson Correlation	.771**	1	.945**	.399**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	270	270	270	270
Total Technological Competence	Pearson Correlation	.930**	.945**	1	.474**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	270	270	270	270
Lifelong Learning Disposition	Pearson Correlation	.500**	.399**	.474**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	270	270	270	270

Discussion and Conclusion

In this study, the relationships between primary school teachers' technological competencies and their lifelong learning dispositions were examined with a comparative approach in terms of some variables. According to the findings of the study, teachers' technological competencies in using technology, making technology available and technological competencies in general were found to be at a medium level. These findings are similar to the findings of Hampton et al. (2020), Kibici (2022), Liu, Zhao & Su (2022), Marinoni & van't Land (2020), Stewart et al. In a recent study conducted among graduate schools in the United States, researchers found that the vast majority of surveyed institutions were not fully capable of providing online instruction before the pandemic (Stewart et al., 2021). Liu, Zhao and Su (2022) pointed out that in online teaching, the higher the level of self-efficacy teachers have, the higher their teaching satisfaction will be and students will show positive learning outcomes. It is also predicted that as teachers' technological competencies increase, their ability to use technology with their students will also increase. This suggests that primary school teachers need to strengthen their own teaching and technological competencies and resilience before conducting online teaching.

According to another finding of the study, the relationship between teachers' gender and their technological competencies was analyzed. According to the findings of the study, male primary school teachers obtained high averages in all dimensions and total scores of the technological competence scale. These findings are similar to the findings of studies conducted by Asimaki and Vergidis (2013); Cooper (2006); Jenson, Castell, & Bryson (2003); Lau, and Yuen (2015); Lim, and Meier (2011); Margrett and Marsiske (2002); Sieverding and Koch (2009); Tasner, Žveglic, and Mencin (2017); Whitley (1997); Zhao, Lu, Huang, and Wang (2010). The possibility of a difference in the level of self-confidence between men and women can be a determinant of the technological gender gap. Similarly, Hartzel (2003) points out that the self-efficacy difference between men and women is due to their self-confidence levels. Hargittai and Shafer (2006) state that women have lower self-evaluation levels than men when using digital technology. This situation creates a hypothesis that the gains in the process of direct preliminary experiences expressed by Bandura (1997) may be at a low level for women and should be considered as the reason for the gender gap in technology self-efficacy.

Another finding of the study is the technological competence of primary school teachers according to age variable. According to the findings of the study, primary school teachers aged 50 and above have lower perception of technological competence. As the age increases, the perception of technological competence decreases. These findings are in line with the results of studies conducted byAlrajhi et al. (2017), Chuang and Ho (2011), Gudmundsdottir and Hatlevik (2018), and Liang et al. (2013). As a matter of fact, according to the findings of the study conducted by Chuang and Ho (2011), while older teachers' self-evaluation of pedagogical competence was better than younger teachers, younger teachers were found to be better and higher in technological competence and self-evaluation in this regard. According to the results of Pearson's Correlation Analysis of a study conducted on a sample of 366 Taiwanese preschool teachers, both senior preschool teachers tend to perceive themselves as less knowledgeable about technology than less senior preschool teachers and older preschool teachers tend to perceive themselves as less knowledgeable about technology than younger preschool teachers (Aslan, 2011; Liang, Chai, Koh, Yang, & Tsai, 2013).

Another variable addressed in the research is the lifelong learning dispositions of primary school teachers. According to the research findings, lifelong learning dispositions of primary school teachers were found to be at a moderate level. In addition to these findings, lifelong learning dispositions of the participant teachers show differences according to gender and age groups. In the study, male teachers and participants in lower age groups exhibited high lifelong learning dispositions. These findings are similar to the findings of the studies conducted by Cresson and Dean (2000), Sünbül (2003), Şahin and Arcagök (2014), Winner (2012). In the study conducted by Cresson and Dean (2000), the lifelong learning levels of people related to adult education were investigated. The results of the study revealed that adult educators support the concept of lifelong learning and their beliefs are above the middle level. However, their level of putting the requirements of lifelong learning into practice was found to be lower than their level of belief. The reasons for this situation were mostly cited by the participants as program limitations, limitations arising from institutional policy, and then limitations of resources, limitations of adult learners and educators. In the Kazakh primary school teacher sample of this study, it was concluded that young teachers aged 20-29 with high level of technology use have high lifelong learning competencies. Şahin and Arcagök (2014), in their research examining the level of lifelong learning competencies of teachers in terms of

various variables, revealed that lifelong learning disposition varies according to professional seniority and age. According to the results of this research, it is seen that teachers with a professional seniority of 30 years and above have the lowest competence. In order to ensure that our elderly teachers with lifelong learning disability and teachers with low technology usage level use information technologies effectively, various activities should be carried out in schools to adopt the advantages of technology, the functioning of the education system should be redesigned in coordination with technology, the concept of guidance teacher should be expanded and organized as a lifelong learning life coach, and teachers who have adopted the lifelong learning system, encourage teachers to improve themselves and adopt the lifelong learning system and add value to their lives as a good role and good guide should be appointed here. While teaching, the advantages of technology should be utilized and teachers should be in harmony with technology. Basically, in order for our teachers, who are of great importance in shaping the future, to set an example for the students they will educate, there is a need for teachers who closely follow technology, adopt continuous development, adopt lifelong learning as a basic principle, and know their responsibilities.

Both the findings of this study and the studies in the literature suggest that there is a strong relationship between lifelong learning and educational technologies. In this study, it is seen that lifelong learning and educational technologies are directly related. In the study conducted by İzci and Koç (2012), according to the opinions of pre-service teachers, it was concluded that teachers' utilization of information and communication technologies would support lifelong learning. On the other hand, Winner (2012) stated that in order for teachers to successfully integrate technology into their lessons, the purpose of using technology should also be examined. There may be cases where teachers who use technology effectively for their personal development do not use technology for educational purposes. For this reason, in future studies, the purpose of technology use of primary school teachers whose lifelong learning competencies train lifelong learners can be examined in depth with qualitative research. The knowledge learned in schools can now lose its validity in a short time. In the past, all individuals who had a profession could continue that job for years with the same knowledge they learned, but today this is not possible. Even if people work in the same profession for the rest of their lives, they still need to acquire new knowledge and skills. Therefore, in order for people to keep up with the changes and developments they will encounter throughout their lives, the education system must be capable of providing lifelong learning skills.

According to the results of this study, it was revealed that technological competence affects lifelong learning disposition. Therefore, it is considered that determining the lifelong learning dispositions of primary school teachers, who undertake important tasks on the basis of the Kazakh education system as models for the society, and determining their self-efficacy related to educational technology standards in order to determine the link between lifelong learning and educational technology, and revealing the level of their relationship is of great importance and will contribute to the literature. Accordingly, educational administrators can conduct studies to increase the technological competence and lifelong learning skills of primary school teachers in order to increase their productivity. Thus, teachers' lifelong learning dispositions will also increase. Teachers' lifelong learning dispositions should be supported and activities such as distance education master's degree programs and in-service training should be provided for teachers. This study can be applied to larger groups to ensure broad mass participation or an in-depth qualitative study can be conducted with a small group.

Notes

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