

The Relationship between Lifelong Learning and Attitudes towards the Teaching Profession of Pre-service Teachers

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Abstract:

Introduction: The purpose of this study was to examine the relationship between lifelong learning (LL) and attitudes towards the teaching profession (ATTP) of pre-service teachers. LL and ATTP of pre-service teachers were compared in terms of gender, perceived success level and reading frequency variables.

Methods: This correlational study was conducted with 515 pre-service teachers from a faculty of education located in Turkey's Central Anatolia Region. "Lifelong learning tendency scale" and "Attitude toward the teaching profession scale" were used as data collection tools.

Results: The results of the study showed that there was a positive and statistically significant correlation between pre-service teachers' LL and ATTP. Gender, perceived success level and reading frequency are variables that affect LL and ATTP of pre-service teachers.

Discussion: Pre-service teachers' LL and ATTP provide important tools for improving teacher quality and learning quality of students, making it an indispensable integral part of the teaching profession in developed countries.

Limitations: This study focused on pre-service teachers. A similar study can be designed with teachers and instructors. The quantitative research method was used in this study. A detailed examination with qualitative data was not carried out, which can be considered a limitation.

Conclusions: It was revealed that the LL level of pre-service teachers was high and the ATTP level was very high. Being female affects LL and ATTP levels of pre-service teachers positively. Another result of this study is that the more successful pre-service teachers perceive themselves to be, the more lifelong learning tendencies they have. The more frequently pre-service teachers read books in daily life, the more their lifelong learning tendencies and attitudes towards the teaching profession increase. The results of this study revealed that there was a moderate, positive and statistically significant correlation between LL and ATTP.

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Key words: lifelong learning; motivation; perseverance; curiosity; self-regulation; teaching profession.

Introduction

In order for countries to continue their development and change into 21st century societies, all individuals should be given the characteristics of learners based on a lifelong learning culture. In a learning society, individuals should have the ability to access information, use and produce information and technology. From this perspective, there is a need for individuals who can research, question, think critically, solve problems and think creatively; that is, have higher-order thinking skills. The most fundamental responsibility in raising individuals with these desired qualities is the education system because learning is at the centre of a sustainable and developing modern economy (Adams, 2007). Lifelong learning (LL), one of the current concepts frequently used in education in recent years, is an important part of the process of raising qualified people. In the 21st century, the knowledge gained in university education is out-of-date before graduation and the individual has to continue learning in business life for professional development. University students must be lifelong learners if they want to be a part of the learning society and contribute to society (Candy et al., 1994). While LL is not a new concept in Turkey, work for the establishment of the lifelong learning system has gained momentum since the 2000s. In this context, the 2009-2013 Lifelong Learning Strategy Document was prepared and implemented (Ministry of National Education [MoNE], 2014). LL is not limited to formal learning, but also includes informal and non-formal learning (Illeris, 2006). LL refers to the wide range of learning processes in which an individual is involved throughout his life to develop knowledge, skills and competencies for personal and professional development (Quinn & Sinclair, 2016).

Lifelong learners are autonomous learners who enjoy learning, have self-control, strong internal motivation, curiosity and perseverance. Today, the needs of the global economy, rapidly changing technological needs and the increasing need for manpower trained in different areas of the business world require individuals to learn how to learn (Demirel, 2009). Individuals with lifelong learning habits are information literate individuals (Akkoyunlu, 2008). Nine standards provide a conceptual framework for defining information literate individuals (American Library Association & Association for Educational Communications and Technology, 1998). These standards include the individual's effective access to information, the efficient, critical, creative and competent use of information, and the effort to produce knowledge. The information literate individual follows their personal interests as an independent learner. Information literate individuals value creative expressions of other knowledge, such as literature. The

information literate individual acknowledges the importance of knowledge for a democratic society and strives for a learning society. They exhibit ethical behaviour regarding information and information technology (American Library Association & Association for Educational Communications and Technology, 1998).

Lifelong learning is needed in adult education in order to facilitate the adaptation of adults to the changing conditions of business life and to improve their professional competencies as well as personal development (Dong, 2004; Friessen & Anderson, 2004). The relationship between lifelong learning and attitudes towards the profession is the main problem in this study. As an important part of community development, teachers who are lifelong learners can make important contributions to society as well as to students (Laal, 2011; Lasser & Fite, 2011; Matheson & Matheson, 1996).

When you ask parents and community members about their most important demands for their children, they usually agree that they want the best teacher possible in every classroom. Research shows that the most effective strategy to educate successful and qualified students is to achieve the professional development of teachers (Mizell, 2010). Achieving professional development of teachers is only possible if they are lifelong learners (Acar & Uçuş, 2017; Fenwick, 2001). In order to raise lifelong learners in society, pre-service and in-service teacher education programs should undergo radical changes (Cornford, 1999). Learning to learn, which is the core of LL, is the most valuable quality for the professional development of individuals from all professions. A prerequisite for training teachers who are successful in their profession and accelerate society is to ensure that pre-service teachers have positive attitudes towards their profession. In this context, it is thought that determining the relationship of LL, which can be associated with every profession, with ATTP will make a significant contribution to the literature.

Pre-service teachers' lifelong learning and their attitudes towards the teaching profession

LL teachers learn from many different sources such as students, parents, their peers and digital or non-digital sources in formal and informal environments (Knapper & Cropley, 2000). LL pre-service teachers can be defined as individuals who are highly motivated to learn, who do not give up easily in the face of difficulties, who persistent to achieve their aims, who can organise their own learning, have self-development, higher-order thinking skills and are interested in learning (Demirel, Sadi, & Dagyar, 2016; Diker Coşkun & Demirel, 2012, Kula, 2022a).

Attitude can be defined as an individual's positive or negative emotion/behavioural tendencies towards a situation, event or phenomenon

(Kenrick, Neuberg, & Cialdini, 2005). The ATTP of pre-service teachers will form the basis of their future professional understanding. Pre-service teachers' ATTP affects their future professional development (Kwakman, 2003), performance (Üstüner, 2006), self-efficacy (Demirtaş, Cömert, & Özer, 2011; Kula, 2022b; Yakar & Yelpaze, 2019) and satisfaction (Recepoglu, 2013). It is thought that there may be many commonalities between the characteristics of LL individuals listed above and the characteristics of individuals who have a positive attitude towards the teaching profession. It is necessary to determine the relationship between LL and ATTP of pre-service teachers and the variables with which these properties differ, in order to understand and develop the qualifications of pre-service teachers because teachers play a key role in creating successful changes in education and therefore in society (Van der Heijden, Geldens, Beijjaard, & Popeijus, 2015). The purpose of this study was to examine the relationship between LL and ATTP of pre-service teachers. For this purpose, the answers were sought to these questions:

1. What are the levels of LL and ATTP among pre-service teachers?
2. Do pre-service teachers' LL and ATTP differ significantly according to gender, perceived success level and reading frequency variables?
3. Is there a significant relationship between LL and ATTP of pre-service teachers?

1 Method

This study, which examined the relationship between lifelong learning and the attitudes towards the teaching profession, was designed with the correlational survey model which aims to describe the relationship between two or more variables and make predictions.

1.1 Participants

Ethical and research permissions required to conduct the research were obtained from Kirsehir Ahi Evran University Social and Humanities Scientific Research and Publication Ethics Committee with the number 2020/5. The target population of this research consisted of pre-service teachers from Kirsehir Ahi Evran University, Faculty of Education. The study used the convenient sampling method and 515 pre-service teachers were randomly selected to participate voluntarily in the research. The data were collected from participants who volunteered to participate in the study in the fall semester of 2020-2021. At this stage, the scope and purpose of the research was explained to the participants. The demographic characteristics of the participants are given in Table 1.

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Table 1

<i>Participant demographic information</i>		
<u>Gender</u>	<u>n</u>	<u>%</u>
Female	397	77.1
Male	118	22.9
<u>Age</u>	<u>n</u>	<u>%</u>
17-20	304	59
21-25	184	35.7
26-30	14	2.7
31-35	8	1.6
36+	5	1
Age <i>M(SD)</i>		20.94 (.72)
<u>Department</u>	<u>n</u>	<u>%</u>
Social Studies Education	182	35.3
Classroom Education	121	23.5
Guidance and Psychological Counselling	95	18.4
Preschool Education	72	14
Mathematics Education	23	4.5
Turkish Education	17	3.3
Science Education	4	.8
Computer and Instructional Technology Education	1	.2
<u>Grade</u>	<u>n</u>	<u>%</u>
1st Year	224	43.5
2nd Year	94	18.3
3rd Year	173	33.6
4th Year	24	4.7
<u>Perceived Success Level</u>	<u>n</u>	<u>%</u>
Low	37	7.2
Moderate	433	84.1
High	45	8.7
Perceived Success Level <i>M(SD)</i>		2.01 (.40)
<u>Reading Frequency</u>	<u>n</u>	<u>%</u>
Every day	123	23.9
A few days a week	189	36.7
Occasionally	165	32
Rarely	34	6.6
Never	4	.8
Reading Frequency <i>M(SD)</i>		3.76 (.92)
<i>Total</i>	<i>515</i>	<i>100</i>

1.2 Data collection tools

Lifelong Learning Tendency Scale (LLTS): The LL of participants was determined with LLTS (Diker Coşkun & Demirel, 2010) a four-dimensional, 6-point Likert scale with the extreme points labelled as "strongly disagree" (1) and "strongly agree" (6). The dimensions of the scale were specified as motivation (6 items), perseverance (6 items), lack of regulating learning (6 items) and lack of curiosity (9 items). On the scale, items under the dimensions of "lack of regulating learning" and "lack of curiosity" were reverse scored. The Cronbach's alpha reliability coefficient for the total scale was .893. The interval coefficient of the scale was calculated as 0.83 by using the formula (Number of Intervals/Likert Type) in order to determine the LL levels of pre-service teachers.

Attitude Towards the Teaching Profession Scale (ATTPS): In the study, participants' attitudes towards the teaching profession were determined with ATTPS, a 35-item, 3-dimensional (affection, moral, accordance) scale developed by Çetin (2006). The extreme points of the 5-point Likert scale were labelled as "strongly disagree" (1) and "strongly agree" (5). The Cronbach's alpha reliability coefficient for the total scale was .946. The interval coefficient of the scale was calculated as 0.80 by using the formula (Number of Intervals / Likert Type) in order to determine the ATTP levels of pre-service teachers.

Table 2

Scale levels and intervals

<u>Scale Type</u>	<u>Evaluation Criteria</u>	<u>Evaluation Intervals</u>
5-point Likert	Very Low	1.00 – 1.79
	Low	1.80 – 2.59
	Moderate	2.60 – 3.39
	High	3.40 – 4.19
	Very High	4.20 – 5.00
6-point Likert	Very Low	1.00 – 1.83
	Low	1.84 – 2.67
	Slightly Low	2.67 – 3.50
	Slightly High	3.50 – 4.33
	High	4.34 – 5.17
	Very High	5.17 – 6.00

Personal Information Form (PIF): The PIF was developed by the researcher in order to determine the age, gender, department, perceived success level and reading frequency of the participants. In the development process of the PIF, lifelong learning and professional attitude literatures were examined. In line with the literature, the variables to be included in the form were decided. The form

was finalized by obtaining expert opinion regarding the PIF from a researcher in the field of educational sciences.

1.3 Data analysis

SPSS 22.0 software package was used to calculate statistics. Skewness and kurtosis values were examined to test the normality of the data. It was observed that LLTS skewness varied between -1.078 and .108 with kurtosis between 1.195 and .215; ATTPS skewness was between -1.159 and .108 with kurtosis between .518 and .215. When kurtosis and skewness values are between -1.5 and +1.5, the data are considered to be normally distributed (Tabachnick & Fidell, 2013). For this reason, parametric tests were used for the analysis of the data. The independent samples t test was used to compare the means between two sample groups, and one-way analysis of variance was used to compare more than two means. Pearson correlation coefficient was used to determine the relationship between variables, and regression analysis was used to determine the effects.

2 Findings

Descriptive statistics such as minimum, maximum, mean score, standard deviation and level for the scales are given in Table 3.

Table 3

Descriptive statistics for the scales

<i>Scales and Sub-dimensions</i>	<i>Min</i>	<i>Max</i>	<i>\bar{x}</i>	<i>SD</i>	<i>Level</i>
<i>LLTS</i>	2.22	6.00	4.96	.65	High
LLTS-Motivation	1.00	6.00	5.22	.73	Very high
LLTS-perseverance	1.83	6.00	4.82	.79	High
LLTS-regulating learning	1.83	6.00	5.13	.84	High
LLTS-curiosity	1.44	6.00	4.77	.91	High
<i>ATTPS</i>	2.43	5.00	4.35	.59	Very high
ATTPS-affection	1.68	5.00	4.22	.74	Very high
ATTPS-moral	2.88	5.00	4.76	.34	Very high
ATTPS-accordance	1.40	5.00	4.28	.80	Very high

LLTS: Lifelong Learning Tendency Scale

ATTPS: Attitude towards the Teaching Profession Scale

Pre-service teachers had high LL level and very high ATTP level. When the standard deviation values of the total scores and sub-dimensions of the scales were examined, the most homogeneous distribution in ATTPS is for the moral sub-dimension (SD = .34).

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The LL and ATTP of pre-service teachers were examined according to gender, perceived success level and reading frequency variables. Table 4 shows the results of the t-test regarding pre-service teachers' LL and ATTP by gender.

Table 4

Comparison of scores of pre-service teachers based on LLTS and ATTPS according to gender

<u>Variable</u>	<u>Gender</u>	<u>N</u>	<u>\bar{x}</u>	<u>SD</u>	<u>T</u>	<u>p</u>
LLTS	Female	397	5.06	.57	6.38	.000**
	Male	118	4.64	.78		
ATTPS	Female	397	4.44	.53	6.37	.000**
	Male	118	4.06	.68		

**p<0.01

LLTS: Lifelong learning tendency scale

ATTPS: Attitude Towards the Teaching Profession Scale

LL and ATTP of pre-service teachers showed a significant difference in favour of females according to the gender variable (LLTS- $\bar{x}_{(female)}$ =5.06; $\bar{x}_{(male)}$ =4.64, T= 6.38, p<0.01; ATTPS- $\bar{x}_{(female)}$ =4.44; $\bar{x}_{(male)}$ =4.06, T=6.37, p<0.01). In addition, it was calculated that there was a significant difference in favour of females for all sub-dimensions of both scales (LLTS-Motivation $\bar{x}_{(female)}$ = 5.30; $\bar{x}_{(male)}$ =4.92, T=5.08, p<0.01; LLTS - Perseverance $\bar{x}_{(female)}$ =4.87; $\bar{x}_{(male)}$ = 4.62, T=3.06, p<0.01; LLTS- Regulating learning $\bar{x}_{(female)}$ =5.23; $\bar{x}_{(male)}$ = 4.81, T=4.97, p<0.01; LLTS - Curiosity $\bar{x}_{(female)}$ =4.89; $\bar{x}_{(male)}$ =4.35, T=5.93, p<0.01; ATTPS-affection $\bar{x}_{(female)}$ =4.32; $\bar{x}_{(male)}$ =3.91, T=5.41, p<0.01; ATTPS-moral $\bar{x}_{(female)}$ =4.82; $\bar{x}_{(male)}$ =4.56, T=7.47, p<0.01; ATTPS-accordance $\bar{x}_{(female)}$ = 4.39; $\bar{x}_{(male)}$ =3.93, T=5.60, p<0.01).

Table 5

Comparison of scores for pre-service teachers based on LLTS and ATTPS according to perceived success level

<u>Variables</u>	<u>Perceived success level</u>	<u>N</u>	<u>\bar{x}</u>	<u>SD</u>	<u>F</u>	<u>p</u>	<u>Post-Hoc</u>
LLTS	1. Low	37	4.63	.87	9.52	.000	2>1
	2. Moderate	433	4.96	.63			3>1
	3. High	45	5.25	.46			3>2
ATTPS	1. Low	37	4.15	.60	2.32	.100	
	2. Moderate	433	4.37	.58			
	3. High	45	4.39	.64			

LLTS: Lifelong learning tendency scale

ATTPS: Attitude towards the Teaching Profession Scale

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It was concluded that pre-service teachers' LLTS scores differed significantly according to their perceived success level ($p < 0.01$). The ATTPS scores of pre-service teachers did not differ according to the perceived success level. According to the Tukey test results, pre-service teachers with high perception of success had higher LL than their peers with low and moderate perception of success. In other words, the more successful pre-service teachers perceive themselves, the more lifelong learning tendencies increase.

Table 6

Comparison of scores for pre-service teachers based on LLTS and ATTPS according to reading frequency

<u>Variables</u>	<u>Reading frequency</u>	<u>N</u>	<u>\bar{x}</u>	<u>SD</u>	<u>F</u>	<u>p</u>	<u>Post-Hoc</u>
LLTS	1. Every day	123	5.25	.46	36.00	.000	1>3
	2. A few days a week	189	5.14	.51			1>4
	3. Occasionally	165	4.70	.69			1>5
	4. Rarely	34	4.38	.61			2>3
	5. Never	4	3.46	.89			2>4
							2>5
							3>5
							4>5
ATTPS	1. Every day	123	4.46	.63	6.50	.000	1>3
	2. A few days a week	189	4.43	.53			1>4
	3. Occasionally	165	4.26	.60			2>4
	4. Rarely	34	4.03	.58			
	5. Never	4	3.80	.71			

LLTS: Lifelong learning tendency scale

ATTPS: Attitude Towards the Teaching Profession Scale

It was concluded that LLTS and ATTPS scores of pre-service teachers showed significant differences according to their reading frequency ($p < 0.01$). According to the Tukey test results, pre-service teachers with high reading frequency had higher LL and ATTP than those with low reading frequency. The more pre-service teachers read, the more their LL propensity and ATTP increased.

Table 7

Pearson correlation coefficient between LL and ATTP

<u>Variables</u>	<u>r</u>	<u>p</u>	<u>N</u>
LL-ATTP	.480**	.000	515

** $p < 0.01$

LL: lifelong learning

ATTP: Attitude towards the Teaching Profession Scale

The results of correlation analysis revealed that there was a moderate (Cohen, 1988), positive and statistically significant correlation between LL and ATTP. As the LL tendency increases, ATTP of pre-service teachers also increased. The relationships between the sub-dimensions of the scales are as follows:

Table 8

Pearson correlation coefficients between sub-dimensions

<i>Variables</i>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
1. Motivation	1						
2. Perseverance	.655**	1					
3. Regulating learning	.356**	.255**	1				
4. Curiosity	.471**	.481**	.564**	1			
5. Affection	.345**	.279**	.280**	.387**	1		
6. Moral	.389**	.256**	.365**	.317**	.419**	1	
7. Accordance	.394**	.262**	.334**	.439**	.719**	.350**	1

**p<0.01

LLTS: Lifelong learning tendency scale

ATTPS: Attitude towards the Teaching Profession Scale

It was concluded that there was a positive and statistically significant correlation between all sub-dimensions of LLTS and ATTPS of pre-service teachers. The effect size for the correlation coefficients (r) are interpreted as: weak from .10 to .29; moderate from .30 to .49; strong from .50 to .69; and very strong .70 and higher (Davis, 1971). There was a positive moderate relationship between motivation and affection (r=.345, p<0.01), motivation and moral (r=.389, p<0.01), motivation and accordance (r=.394, p<0.01), regulating learning and moral (r=.365, p<0.01), curiosity and affection (r=.387, p<0.01), curiosity and moral (r=.317, p<0.01), curiosity and accordance (r= .439, p<0.01), and regulating learning and accordance (r=.334, p<0.01). There was a weak positive relationship between perseverance and affection (r=.279, p<0.01), perseverance and moral (r=.256, p<0.01), perseverance and accordance (r= .262, p<0.01), and regulating learning and affection (r=.280, p<0.01).

The effect of LL tendency on teaching attitude is given in Table 9.

Table 9

Results for regression analysis to determine the effect of lifelong learning on attitude towards the teaching profession

<i>Variable</i>	<i>B</i>	<i>Std. Error</i>	<i>β</i>	<i>t</i>	<i>p</i>
(Constant)	2.175	.177		12.266	.000
Lifelong learning	.439	.035	.480	12.393	.000

$R = .480, R^2 = .230, F = 153.596, p < 0.01;$
Dependent variable: attitude towards teaching profession

Cohen (1988) interpreted the effect sizes for the regression coefficient (R^2) as: low .02, moderate .13, and strong .26. The results of regression analysis revealed that the LL of pre-service teachers has a positive strong effect on their ATTP ($F = 153.596, p < 0.01$). In total, 23% of the change in ATTP of the participants could be explained by their LL tendency ($R^2 = .230, p < 0.01$). LL has a positive effect on ATTP ($\beta = 0.48; p < 0.01$).

3 Discussion

This research aimed to determine pre-service teachers' LL and ATTP levels and the relationship between them. It was revealed that the LL level of pre-service teachers was high and ATTP level was very high. The fact that the study was conducted with young pre-service teachers may affect these results because research shows that as the age of an individual increases, lifelong learning decreases (Yıldız Durak, Seferoğlu, & Sen, 2020; Yıldız Durak & Tekin, 2020). High LL and ATTP is consistent with previous research results (Acar & Uçus, 2017; Akyol, 2016; Ayra & Kösterelioğlu, 2015; Bulaç & Kurt, 2019; Demirel & Akkoyunlu, 2010; Els, 2009; Erdoğan & Eker, 2020; Ergün & Cömert Özata, 2016; Evin Gencil, 2013; Karakuş, 2013; Şahin, Akbaşlı, & Yanpar Yelken, 2010; Şahin, Sarıtaş, & Çatalbaş, 2020; Ünal & Akay, 2017; Yaman & Yazar, 2015). It is thought that pre-service teachers who have a positive attitude towards their profession and are lifelong learners, will perform their profession lovingly and willingly in the future, will not avoid any sacrifice for the multi-faceted development of their students, and as a result, they will guide their students better (Brčić & Perin, 2014; Orgoványi-Gajdos & Kovács, 2020). LL and ATTP of pre-service teachers provides an important tool for improving teacher quality and students' learning quality, making it an indispensable, integral part of the teaching profession in developed countries (Day & Sachs, 2004).

Being female affects pre-service teachers' LL and ATTP levels positively. LL and ATTP scores of female pre-service teachers are significantly higher than male pre-service teachers. Gender stands out as an important variable for LL and ATTP. In all sub-dimensions of LLTS and ATTPS (motivation, perseverance,

regulating learning, curiosity, affection, moral and accordance), the average scores for female pre-service teachers were significantly higher than male ones. In line with this result of the study, female pre-service teachers are more eager to learn new knowledge and skills than males, they are more open to innovation, they do not give up in the face of failures and make efforts to improve, their motivation is higher in the learning process and they have a more positive attitude towards the teaching profession. Although there are studies in the literature suggesting that the gender factor does not have an effect on LL (Dindar & Bayrakçı, 2015; Şahin & Arcagök, 2014; Yaman & Yazar, 2015), there are also research results that reveal gender as an important factor for LL (Arsal, 2011; Bulaç & Kurt, 2019; Demirel & Akkoyunlu, 2010; Diker Coşkun & Demirel, 2012; Duymuş & Sulak, 2018; Erdoğan & Eker, 2020; Evin Gencel, 2013; Gökyer & Türkoğlu, 2018; Özgür, 2016; Şahin, Akbaşlı, & Yanpar Yelken, 2010; Şahin, Sarıtaş, & Çatalbaş, 2020). Gender is seen as one of the important factors in an individual's learning process (Gouthro, 2009; Tondeur, 2010; Uzunboylu & Hursen, 2013) and motivation (Hargittai & Shafer, 2006), as well as its social meanings.

Another result of this study is that the more successful pre-service teachers perceive themselves, the more lifelong learning tendencies they have. Therefore, it comes to mind that the self-efficacy perceptions of pre-service teachers may be an important variable affecting lifelong learning. As a matter of fact, there are research results showing a significant positive relationship between self-efficacy and LL tendency (Ayra & Kösterelioğlu, 2015; Karaduman & Tarhan, 2017; Özçiftçi & Çakır, 2015; Sıvacı & Çöplü, 2020; Yalın Uçar & Uysal, 2019). It was stated that academic motivation also increases academic self-efficacy and is a mediating variable for LL tendency (Sıvacı & Çöplü, 2020). Therefore, it is emphasized that in order to increase the effect of academic self-efficacy of university students on lifelong learning tendencies, it is necessary to take their academic motivation into account and increase it. Studies show the importance of increasing pre-service teachers' motivation to learn and, in this way, to perceive themselves as successful teachers (Kula, 2022b). The lifelong learning tendencies of pre-service teachers who perceive themselves as successful also increase and they are encouraged to develop positive attitudes towards their profession. As a result, it is necessary to include academic activities such as seminars, conferences, workshops and different practical projects that can be applied in the teaching process, which enable pre-service teachers to perceive themselves as successful and increase their motivation.

In this study, it was revealed that the more frequently pre-service teachers read books in daily life, the more their lifelong learning tendencies and attitudes towards the teaching profession increase. One of the ways to obtain individuals who love their profession, who have positive attitudes towards their profession

and have lifelong learning tendencies was revealed to be encouraging individuals to like reading and developing their reading habits (Ren & Li, 2017). This result of the research can be considered to be a very important result for teacher training programs. The result of this research, which reveals the relation between reading frequency and LL, is consistent with the learning definitions in the literature. There is a strong correlation between learning and intellectual, cultural and emotional components. According to Crick, Broadfoot and Claxton (2004) "Learning is also influenced by variables that are present in the socio-historical environment of the learner such as significant relationships, cultural tools, worldviews and traditions". Reading strengthens these variables that enable the individual to learn. Studies reveal a positive relationship between information literacy and LL tendencies (Demirel & Akkoyunlu, 2017; Garipagaoglu, 2013; Mbagwu, Chukwuedo, & Ogbuanya, 2020; Oguz & Atasven, 2016; Sadioglu et al. 2009; Solmaz 2017). The prerequisite for providing information literacy is to increase the reading frequency of individuals and to develop effective reading and comprehension skills (Zimmerer, Skidmore, Chuppa-Cornell, Sindel-Arrington, & Beilman, 2018). As a result, it is important for pre-service teachers to be individuals who read, love to read and comprehend what they read in order to train teachers with lifelong learning habits.

The results of this study revealed that there was a moderate, positive and statistically significant correlation between LL and ATTP. The LL of pre-service teachers had a positive strong effect on their ATTP. In the literature, results of similar studies confirm this correlation (Çam & Üstün, 2016; Ünal & Akay, 2017). In this way, it is considered necessary to train pre-service teachers as lifelong learners in order to have a positive professional attitude and to raise successful students. It is known that teachers' individual characteristics affect their professional development and their students' success (Hattie, 2012; Kwakman, 2003). It is also known that there is a positive relationship between pre-service teachers' self-efficacy perceptions and LL (Akyol, 2016; Ayra & Kösterelioglu, 2015). When interpreted with the current research results, it can be stated that pre-service teachers with improved lifelong learning skills both perceive themselves to be professionally competent and develop a positive attitude towards their profession. When different research results are examined, when teachers' lifelong learning motivation and persistence increase, their professional values of creativity, mental stimulation, sacrifice and diversity (including various tasks, doing different jobs) also increase (Tanatar & Alpaydin, 2019). Therefore, it is predicted that improving the LL of teachers, pre-service teachers and actually each member of society will support the multi-directional development of individuals both personally and professionally. Lifelong learning teachers are known to experience less burnout (Yıldız Durak, Seferoglu, & Sen,

2020). Occupational burnout is an emotion that negatively affects professional performance and causes poor work performance (Maslach et al., 2001). The research results of Kazu and Demiralp (2016) suggest that academics think that teacher training programs are not suitable for gaining lifelong learning competence that programs are insufficient to improve pre-service teachers' personal development, and that gaining lifelong learning competence is left in the background in programs implemented in education faculties. There should be awareness in teacher training institutions that the pre-service teachers being lifelong learners is an important factor affecting their professional attitudes. In addition, developing teacher training programs in this way is an important point in raising highly qualified teachers who love the profession in Turkey. As a matter of fact, Els (2009) suggests that higher education institutes should know that they play an important role in shaping young minds and update their curriculum accordingly.

Conclusion

LL is a concept that should be turned into a philosophy of life for teachers and pre-service teachers. It has become a necessity in today's living conditions for teachers to teach LL to each student they train. The problem in this study focused on pre-service teachers. A similar study can be designed with teachers and instructors. The quantitative research method was used in this study. A detailed examination with qualitative data was not carried out, which can be considered a limitation. The result showing that LL skills and attitudes of female pre-service teachers towards the teaching profession are higher than male pre-service teachers can be examined in a sociological context in future studies. The reasons that push females to be more competitive in professional and social life in Turkey and the effects of gender roles on female teachers may be subjects for future educational research.

It is striking that the more frequently the pre-service teachers read in daily life, the higher their LL and ATTP increase. In future studies, the types of books that affect pre-service teachers' LL and ATTP can be investigated. In this way, practices such as projects, assignments and reading clubs that will encourage pre-service teachers to read can be disseminated in courses given in faculties of education.

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