

## Examination of the Relationship Between Teachers' Epistemological Beliefs on Learning and Life Long Learning Tendencies

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### Abstract

This study was conducted to determine whether the relationship between epistemological beliefs about learning and lifelong learning tendencies of teachers working in Akyazı district of Sakarya province in the 2020-2021 academic year shows a statistically significant difference in terms of gender, seniority, and type of school. Two scales were used in the study: "The Lifelong Learning Tendency Scale" was used to determine teachers' lifelong learning tendencies, and "The Epistemological Belief Scale for Learning Scale" was used to determine their epistemological beliefs about learning. Quantity of method was used in the study, and an easy accessibility sample type was chosen for the sample group. Since the data did not show a normal distribution, Mann Whitney U was used for bivariate questions from non-parametric tests, Kruskal-Wallis for questions with more than two variables, and Spearman Correlation Test to determine the relationship between scales. According to the results, it was determined that teachers' perceptions of their epistemological beliefs towards learning were moderate, and the average of their perceptions of lifelong learning tendencies was high. According to Spearman Correlation Analysis, it was seen that there was no statistical relationship between teachers' epistemological beliefs about learning and their lifelong learning tendencies.

**Key words:** Epistemological belief, epistemological belief in learning, lifelong learning, lifelong learning tendency, teacher.

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### Introduction

The concept of knowledge has been sought after for centuries. People have been trying to understand and acquire knowledge for a long time. The pursuit of knowledge is something that has been a part of human history for a long time. Humanity has been developed parallel with the ability to produce and use knowledge and has reached today's life. The ability of humans to produce and use knowledge is what sets us apart from other living things. Other species may have unique abilities that help them survive, but humans have knowledge, which is the product of reason and intelligence. We use our knowledge to shape our environment and create suitable living spaces. While knowledge is undoubtedly important to humanity, the question remains: "What is knowledge?" The philosophy of knowledge, or epistemology, helps us answer this question. Epistemology is a branch of philosophy that deals with the nature, source, and scope of knowledge. It provides information about the nature, source, and extent of knowledge. Epistemology is formed by combining the Greek word episteme and the Greek equivalent of the word science, logos, and it means knowledge science (Çüçen, 2001). Epistemology is the study of knowledge, specifically the relationship between the subject and the object of knowledge. It investigates and examines the limits, accuracy, source, collection, and transfer of information. In other words, it is a discipline that looks at how knowledge is created, used, and shared. Belief is defined as being devoted to a situation, phenomenon, or concept with a position of motion (Seitz, Paloutzian & Angel, 2016). The situation discussed in the text occurs at different levels in each individual, which leads to individual differences. Kaplan (2006) also emphasized that beliefs can affect people's behavior and thoughts, leading to individual differences. Because beliefs have a significant impact on how people behave, it is thought that they can also have a significant effect on how people make sense of information and learn new information.

On the other hand, epistemological belief can be thought of as an individual's attitude towards knowledge. According to Schommer (1994), epistemological beliefs are beliefs about what knowledge is, how it is

acquired, and how learning occurs. These beliefs can affect a person's approach to learning, academic activities, classroom behavior, and their ability to interpret and use information. Hofer (2001) argued that understanding the beliefs of teachers and students about knowledge can provide a better understanding of learning in educational environments. Therefore, it is thought that epistemological beliefs can also be important in the learning and teaching process, as people's beliefs affect their decisions and behaviors.

In today's world, there are significant changes and developments in the field of information and technology. Countries that keep up with this situation are marketing science and technology to undeveloped countries (Yenilmez & Balbağ, 2016). In order to be a developed and advanced society, there must be individuals who meet the needs of the age in that society. The needs of the age cannot be met only through formal education. Individuals need informal education paths for their personal development. From this point of view, the concept of lifelong learning emerges. The European Commission (2007) defines lifelong learning as self-development and increasing skills in social and professional fields, away from the concepts of time and space. Coşkun and Demirel (2012) describe lifelong learning as "a continuous process that develops an individual's potential and competencies throughout his/her life." In another definition, lifelong learning; develops and strengthens the skills, knowledge, perceptions, and views that individuals have gained throughout their lives; It is defined as continuous and supportive learning activities that ensure the sanction of these competencies throughout life (Berberoğlu, 2010). It can be said that individuals with lifelong learning skills can access information under all conditions and can be solution-oriented in the face of problems (Rogers, 1995).

The teacher is one of the essential building blocks of the education system, beyond the recognition that the role of the teacher in the education world is excellent. Teachers are role models for their students. Teachers, who are pointed out as role models, are expected to have these features to find the features they expect from their students. Whether the learning beliefs acquired by individuals through previous learning affect their tendencies towards new learning and information at all times and in an early place has revealed this problem situation.

According to Deryakulu (2006), belief refers to the personal acceptance that individuals have gained against the situations and events they encounter throughout their lives and that they undoubtedly adopt as accurate. At the same time, epistemological belief; constitutes the personal acceptance of individuals about the source point of knowledge and how it exists (Hofer, 2001). Because beliefs are our behaviors and acceptances, they are also crucial for educators, who are one of the main characters of the learning and teaching process. Buehl's (2003) model shows that students' epistemological beliefs affect their cognitive processes, motivations, and the methods they use in learning, which also impacts academic success.

Based on the fact that epistemological beliefs directly affect learning and teaching processes and that these beliefs are not innate and unchangeable. They develop and change over time, and it is thought that teachers will shape educational activities in line with their values and beliefs (Pan, 2016). At the same time, it is necessary to determine teachers' epistemological beliefs toward learning to make educational activities more efficient and effective.

Today's information age is in constant change and development. New knowledge learned can undergo change and development in a short time. In the 21st century, individuals will feel competent as long as they can keep up with the times. In the 21st century, where information is changing rapidly, teachers have assumed an essential role in the education life of individuals. In this direction, educators, who are an indispensable part of education, should have lifelong learning skills. They are expected to gain students by using these features effectively in educational activities. It is thought that a teacher with lifelong learning skills can meet our age's educational needs and characteristics. Because it can be said that a teacher with these skills is constantly open to learning, keeps up with changes and developments, and thus benefits from new educational activities. Now, learning and access to information can occur not only in the school environment but at any time of the day and in any place.

The principle of raising lifelong learners and sustaining learning individually, which is among the objectives of education, states that individuals should take responsibility for personal learning on themselves. (Haseski, Odabaşı and Kuzu, 2015). Individuals learning to learn can meet their learning needs. Thus, the learning process goes on continuously. Individuals will have role model teachers to take as an example while learning to learn in the education system. These mentioned role model teachers are also expected to have this skill and transfer it to their students.

In line with the above statements, this study examines the relationship between teachers' epistemological beliefs towards learning and lifelong learning tendencies regarding variables such as age, gender, seniority, and marital status. At the same time, when the literature is examined, it is thought that there has not been a study on this subject before, and it will be an example for the studies to be done.

The study's problem statement is "Is there a significant relationship between teachers' epistemological beliefs about learning and their lifelong learning tendencies?". In addition, answers to the following sub-problems were sought in addition to the main problem in the study.

1. Do teachers' epistemological beliefs about learning make a statistically significant difference according to demographic variables (gender, marital status, professional seniority, type of school, age)?
2. Do teachers' lifelong learning tendencies make a statistically significant difference according to demographic variables (gender, marital status, professional seniority, type of school, age)?
3. Is there a significant relationship between teachers' epistemological beliefs toward learning and their lifelong learning tendencies?

## **Method**

In this study, a relational survey model was chosen from the general survey models to determine the relationship between the epistemological beliefs of teachers working in Akyazı district of Sakarya province and their lifelong learning tendencies. In addition, gender, professional seniority, type of school, and marital status were also examined in the study. Since the relational screening model aims to determine the existence or degree of change between more than one variable (Karasar, 2017, p.114), this method was chosen in the study. The study universe consists of 1114 teachers working in Sakarya province Akyazı district in the 2020-2021 academic year. In the study sample, the easy accessibility sampling method was chosen the sampling method, and the sample group consists of 303 teachers working in Akyazı District. The characteristics of the teachers in the study sample group, such as gender, professional seniority, marital status, and the type of school they work at, are 139 male (45.88%) and 164 female (54.12%) teachers.

Regarding marital status, 214 of the teachers who participated in the study were married (70,62%), and 89 were single teachers (29,37%). The number of teachers who participated in the scales in terms of seniority years is 141 (46.23%), the number of teachers with a seniority of 1-10 years is 141 (46.23%), the number of teachers with a seniority of 11-20 years is 93 (30.69%), and the number of teachers with a seniority of 21 years and above is 69(22.78%). In the variable of school type, 136 (44.9%) of the teachers who applied the scale stated that they worked in primary school, 93 (30.36%) in secondary school, and 75 (24.75%) in high school. The Epistemological Belief Scale for Learning was used in the study to determine teachers' epistemological beliefs about learning. In contrast, the "Lifelong Learning Tendency Scale" was used to determine their lifelong learning tendencies. The Epistemological Belief Scale for Learning (SCA) developed by Sing-Chai et al. (2009), written in English and consisting of 33 items, and later adapted into Turkish by Kutluca et al. (2018) was used to determine teachers' epistemological beliefs about learning. Although the scale consists of 23 questions, it is a 5-point Likert-type scale. Some of the items in the scale consist of positive statements, and some consist of negative statements. The practitioner who implements the AEIS gives the questions a score ranging from 1 to 5. These are; strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5). Accordingly, the highest score that can be obtained from the scale is 115, and the lowest score that can be obtained is 23. A high total score obtained from the scale application indicates that the practitioner's beliefs about epistemology and learning are positive, while low scores indicate negative beliefs about epistemology and learning. The scale developed by Kutluca et al. (2018) includes access to information (1-3-4-7-9-10-11-13-15), genetic nature (18-19-20-21-22-23), absolute, and It consists of four sub-sections: single reality (2-5-6-8) and epistemic contradiction (12-14-16-17). The Cronbach Alpha internal consistency coefficient of the scale was calculated as .61 in the study.

In addition, the Lifelong Learning Tendency Scale developed by Erdoğan and Arsal (2016) was used to determine teachers' lifelong learning tendencies. The scale is a 5-point Likert type and consists of 17 items. Some of the items in the scale consist of positive statements, and some consist of negative statements. The practitioner who implements the AEIS gives the questions a score ranging from 1 to 5. These; are strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5). A maximum of 85 and a minimum of 17 points are obtained from the scale. The scale consists of two sub-sections: willingness to learn (1-2-3-4-5-6-8-9-10-11) and openness to development (12-13-14-15-16-17). While the openness to development sub-dimension expresses the wishes and attitudes of individuals towards new learning, the willingness to learn sub-dimension expresses the ability of individuals to exhibit learning behavior at any time and in any place, which is one of the critical concepts of lifelong learning. High scores on the scale indicate a high tendency toward lifelong learning, and low scores indicate a low tendency toward lifelong learning. There is no reverse scoring in all of the scales. In addition, Cronbach's alpha internal consistency coefficient was found to be .90 in the study.

**Findings**

**Descriptive statistics results on teachers' epistemological beliefs about learning**

The descriptive statistics findings related to teachers' epistemological beliefs about learning, which were made within the scope of the problem of the study, are given in Table 1.

**Table X.** Descriptive statistics results on teachers' epistemological beliefs about learning

Dimension	N	$\bar{x}$	Ss
Access to Information	303	4,01	,400
Against Genetic Nature	303	2,36	,718
Absolute and Single Reality	303	2,25	,560
Epistemic Contradiction	303	3,26	,715
All Scale	303	3,14	,318

When Table 1 is examined, the arithmetic mean of teachers' perceptions of their epistemological beliefs towards learning is moderate, with  $\bar{x}=3.14$ . The arithmetic mean of the genetic nature versus sub-dimension  $\bar{x}=2.36$ ; It is seen that the arithmetic means of the absolute and single reality sub-dimension is  $\bar{x}=2.25$ , and the arithmetic mean of the epistemic contradiction sub-dimension is  $\bar{x}=3.26$ .

**Statistical results of causal comparison of teachers' perceptions of their epistemological beliefs towards learning according to gender variable**

In this sub-problem of the study, the Mann-Whitney U test was applied because there were two independent groups. Analysis results are given in Table 2.

**Table 2.** Statistical results regarding gender variable of teachers' epistemological beliefs towards learning

	Gender	N	Rank average	Rank Sum	U	P
Access to Information	Man	139	150,86	20969,50	11239,50	,834
	Woman	164	152,97	25086,50		
Against Genetic Nature	Man	139	152,21	21156,50	11369,50	,970
	Woman	164	151,83	24899,50		
Absolute and Single Reality	Man	139	158,37	22014,00	10512,00	,239
	Woman	164	146,60	24042,00		
Epistemic Contradiction	Man	139	142,75	19842,50	10112,50	,089
	Woman	164	159,84	26213,50		
All scale	Man	139	151,63	21076,00	11346,00	,945
	Woman	164	152,32	24980,00		

In terms of the gender variable, it was determined whether there was a significant difference in the perception levels of the teachers regarding their epistemological beliefs toward learning. As seen in Table 2, the perception levels of the teachers regarding their epistemological beliefs towards learning did not differ significantly in all sub-dimensions and the whole scale according to gender. [ $U= 11346,00$ ;  $p >.05$ ].

**Statistical results of causal comparison of teachers' perceptions of their epistemological beliefs towards learning according to professional seniority variable**

In this sub-problem of the study, the Kruskal-Wallis test was applied because there were more than two independent groups. Analysis results are given in Table 3.

**Table 3.** Statistical results regarding the professional seniority variable of teachers' epistemological beliefs towards learning

F, $\bar{X}$ and Ss Values	Kruskall-Wallis Results
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	Professional seniority	N	$\bar{X}$ Rank	$\chi^2$	Sd	P
Access to Information	1-10 years	141	155,72	,644	2	,725
	11-20 years	93	151,17			
	21 years and up	69	145,53			
Against Genetic Nature	1-10 years	141	148,51	,537	2	,765
	11-20 years	93	157,04			
	21 years and up	69	152,35			
Absolute and Single Reality	1-10 years	141	136,32	11,102	2	,004*
	11-20 years	93	156,43			
	21 years and up	69	178,07			
Epistemic Contradiction	1-10 years	141	157,79	1,580	2	,454
	11-20 years	93	143,18			
	21 years and up	69	152,05			
All scale	1-10 years	141	146,56	1,375	2	,503
	11-20 years	93	153,20			
	21 years and up	69	161,50			

\*p< .05

The Kruskal-Wallis test was used to determine whether the perception levels of teachers regarding their epistemological beliefs about learning differed significantly according to the variable of professional seniority, since the distribution was not normal. According to Table 8, the difference between the ranking averages of all sub-dimensions and all-scale groups, except for the Absolute and Single Reality sub-dimension, was not significant ( $x^2=1.375$ ;  $p>.05$ ). Considering the mean rank in the Absolute and Single Reality sub-dimension, the perception levels of teachers with a seniority of 21 years and up are the highest ( $XRank= 178.07$ ), while the perception levels of teachers with a seniority of 1-10 years are the lowest ( $XRank= 136.32$ .) was found.

**The causal comparison of statistical results of teachers' perceptions of their epistemological beliefs towards learning according to the variable of school type.**

In this sub-problem of the study, the Kruskal-Wallis test was applied because there were more than two independent groups. Analysis results are given in Table 4.

**Table 4.** Statistical results of teachers' epistemological beliefs towards learning on the variable of school type

F, $\bar{X}$ and Ss Values			Kruskall-Wallis Results			
	Type of School Served	N	$\bar{X}$ Rank	$\chi^2$	Sd	P
Access to Information	Primary school	136	142,06	4,967	2	,083
	Secondary school	92	152,00			
	High school	75	170,02			
Against Genetic Nature	Primary school	136	160,39	2,449	2	,294
	Secondary school	92	147,68			
	High school	75	142,08			
Absolute and Single Reality	Primary school	136	165,76	7,569	2	,023*
	Secondary school	92	147,83			
	High school	75	132,17			
Epistemic Contradiction	Primary school	136	163,76	4,879	2	,087
	Secondary school	92	138,70			
	High school	75	146,98			
All scale	Primary school	136	164,15	4,851	2	,088
	Secondary school	92	140,25			
	High school	75	144,37			

\*p< .05

The Kruskal-Wallis test was applied to determine whether the perception levels of teachers regarding their epistemological beliefs about learning differed significantly according to the type of school they were

assigned to because the distribution was not normal. According to Table 4, the difference between the mean rankings of all sub-dimensions and all-scale groups, except for the Absolute and Single Reality sub-dimension, was not significant ( $\chi^2=4.851$ ;  $p>.05$ ). Considering the mean rank in the Absolute and Single Reality sub-dimension, the perception levels of the teachers working in the primary school were found to be the highest ( $\bar{X}Rank= 165.76$ ). In contrast, the perception levels of the teachers working in the high school were found to be the lowest ( $\bar{X}Rank= 132.17$ ).

**Descriptive statistics results on teachers' lifelong learning tendencies**

An agenda in the world is within the scope of the measures to be taken in Table 5.

**Table 5.** Descriptive statistics results on teachers' lifelong learning tendencies

Size	N	$\bar{x}$	Ss
Willingness to Learn	303	4,25	,384
Openness to Development	303	4,30	,498
All scale	303	4,27	,386

When Table 5 is examined, the arithmetic mean of teachers' perceptions of lifelong learning tendencies for the willingness to learn sub-dimension is  $\bar{x}=4.25$ ;  $\bar{x}=4.30$  for the Openness to Development sub-dimension; For all scales, it is seen that  $\bar{x}=4.27$ .

**Statistical results of causal comparison of teachers' perceptions of lifelong learning tendencies according to gender variable**

In this sub-problem of the study, the Mann-Whitney U test was applied because there were two independent groups. Analysis results are given in Table 6.

**Table 6.** Statistical results regarding the gender variable of teachers' lifelong learning tendencies

	Gender	N	Rank average	Rank Sum	U	P
Willingness to Learn	Man	139	139	146,35	10613,00	,299
	Woman	164	164	156,79		
Openness to Development	Man	139	139	141,98	10005,00	,064
	Woman	164	164	160,49		
All scale	Man	139	142,77	19844,50	10114,50	,091
	Woman	164	159,83	26211,50		

As a result of the Mann Whitney U test, which was conducted to determine whether there was a significant difference between teachers' perceptions of lifelong learning tendencies according to gender status, As can be seen in Table 6, teachers' perceptions of lifelong learning tendencies do not differ significantly in all sub-dimensions and all scales according to gender. [ $U= 10114,50$ ;  $p >.05$ ].

**Causal comparison statistical results of teachers' perceptions of lifelong learning tendencies according to professional seniority variable**

In this sub-problem of the study, the Kruskal-Wallis test was applied because there were more than two independent groups. Analysis results are given in Table 7.

**Table 7.** Statistical results regarding the professional seniority variable of teachers' lifelong learning tendencies

	F, $\bar{X}$ and Ss Values			Kruskall-Wallis Results		
	Professional seniority	N	$\bar{X}$ Sıra	$\chi^2$	Sd	P
Willingness to Learn	1-10 years	141	156,09	4,112	2	,128
	11-20 years	93	159,53			
	21 years and up	69	133,50			
	1-10 years	141	165,12	13,144	2	,001*

Openness to Development	11-20 years	93	156,20	8,355	2	,015*
	21 years and up	69	119,51			
All scale	1-10 years	141	160,53			
	11-20 years	93	158,88			
	21 years and up	69	125,30			

\*p<.05

The Kruskal-Wallis test was used to determine whether there was a significant difference between teachers' perceptions of lifelong learning tendencies according to their professional seniority levels since the distribution was not normal. According to Table 14, a statistically significant difference was found between the rank averages of the Openness to Development sub-dimension and all-scale groups. In contrast, the difference was insignificant in the Willingness to Learn sub-dimension. According to this, when the average rank in the Openness to Development sub-dimension is taken into account, the perception levels of the teachers with 1-10 years of seniority are the highest ( $\bar{X}$ Rank= 165.12), while the perception levels of the teachers with the seniority of 21 years and up are the lowest ( $\bar{X}$ Rank= 119, 51) was found. Similarly, in all scales, the perception levels of teachers with a seniority of -10 years were the highest ( $\bar{X}$ Rank= 160.53), while the perception levels of teachers with a seniority of 21 years and up were found to be the lowest ( $\bar{X}$ Rank= 125.30).

**Statistical results of causal comparison of teachers' perceptions of lifelong learning tendencies according to the variable of school type**

In this sub-problem of the study, The Kruskal-Wallis test was applied because there were more than two independent groups. Analysis results are given in Table 8.

**Table 8.** Statistical results of teachers' lifelong learning tendencies regarding the type of school they work at

F, $\bar{X}$ and Ss Values	Type of School Served			Kruskall-Wallis Results		
	Type of School Served	N	$\bar{X}$ Sıra	$\chi^2$	Sd	P
Willingness to Learn	Primary school	136	140,54	4,770	2	,092
	Secondary school	92	156,99			
	High school	75	166,65			
Openness to Development	Primary school	136	144,96	4,882	2	,087
	Secondary school	92	146,82			
	High school	75	171,13			
All scale	Primary school	136	141,25	5,470	2	,065
	Secondary school	92	152,69			
	High school	75	170,64			

The Kruskal-Wallis test was used to determine whether the perception levels of teachers regarding lifelong learning tendencies differ significantly according to the type of school they work in since the distribution is not normal. According to Table 8, the difference between the mean rankings of both all sub-dimensions and all-scale groups was insignificant ( $\chi^2=5.470$ ;  $p>.05$ ).

**Correlation analysis results**

The results of the Spearman Correlation test, which was conducted to determine the direction and level of the relationship between teachers' epistemological beliefs towards learning and lifelong learning tendencies, are shown in Table 9.

**Table 9.** Findings on the relationship between teachers' epistemological beliefs towards learning and lifelong learning tendencies

		Willingness to Learn	Openness to Development	Lifelong Learning
Access to Information	Rho	,521(**)	,505(**)	,568(**)
	P	,000	,000	,000
	N	303	303	303

Against Genetic Nature	Rho	-,183(**)	-,246(**)	-,230(**)
	P	,001	,000	,000
	N	303	303	303
Absolute and Single Reality	Rho	-,111	-,117(*)	-,119(*)
	P	,054	,042	,039
	N	303	303	303
Epistemic Contradiction	Rho	,026	-,055	-,014
	P	,646	,341	,807
	N	303	303	303
Epistemological belief in learning	Rho	,123(*)	,026	,085
	P	,032	,649	,140
	N	303	303	303

\*\*p<,01, \*p<,05

When Table 9 is examined, there is no statistically significant relationship between teachers' epistemological beliefs towards learning and their lifelong learning tendencies (Spearman's  $\rho = ,085$ ;  $p < ,05$ ). Moreover, there is a positive and moderate relationship between LLTS and Access to Information sub-dimension, which is a sub-dimension of EBTLs. However, it was determined that there was a fragile and negative significant relationship in the Against Genetic Nature sub-dimension. On the other hand, it was determined that there was a fragile and negative significant relationship between the sub-dimensions Willingness to Learn and Openness to Development, which is one of the sub-dimensions of the LLSE scale ( $p < ,01$ ). At the same time, there is a moderate and positive relationship between the Access to Information sub-dimension and the Openness to Development sub-dimension and the Willingness to Learn sub-dimension and a fragile and negative relationship between the Against Genetic Nature sub-dimension and the Willingness to Learn and Openness to Development sub-dimensions. It was also found that there is a relationship in the direction of.

### Conclusion, Discussion and Suggestions

In the study, the epistemological beliefs of teachers working in schools affiliated with the Ministry of National Education in Akyazı were found in the sub-dimensions of the scale; It was found that it was high in the Access to Information sub-dimension, low in the Against Genetic Nature and Absolute and Single Reality sub-dimension, and moderate in the whole scale with the Epistemic Contradiction sub-dimension. When the literature is examined, some studies have different and similar results in similar studies. İçen (2012), Kurt (2010), Karhan (2007), and Akyıldız (2014) stated that they found similar results in the sub-dimensions of the scales and the overall scale. Şahin (2021). A similar study found that 478 teachers working in Siirt had developed beliefs in the 2019-2020 academic year. Satmaz (2019), in his study with 8th-grade students in 2007, stated that students had developed beliefs. Based on the general point average of the scale, it can be said that teachers' epistemological beliefs against learning are moderate because they do not have any attitude, desire, or behavior toward the concept of learning. This situation can also be explained by the number of professional seniority 11 years and up participants is high among teachers who apply the scale. These participants may be in burnout syndrome and cannot take pleasure from the activities carried out in educational activities. At the same time, it can be shown that teachers' desire and interest in learning are negatively affected by the global epidemic. When the teachers' epistemological beliefs towards learning were examined in terms of the gender variable, it was determined that there was no statistical difference in the sub-dimensions of the scale as a whole. When the literature is examined, there are similar studies supporting this result (Bakır & Adak, 2017; Deryakulu & Büyüköztürk, 2005; Başer, Erol and Akbay, 2015; İzgar & Dilmaç, 2008). At the same time, there are studies in the literature where the gender variable differs statistically. (Sadıç and Çam, 2012; Eroğlu and Güandn, 2006; Kaleci, 2012; Kurt, 2009; Kızıklı, 2016; Meral and Çolak, 2009). Aslan (2017), in a similar study, determined that the gender variable caused a positive difference in favor of women. In their study, Murat and Erten (2018) stated that they found a positive effect of the gender variable in favor of male teachers. Based on the findings, it can be said that women and men teachers are close in terms of employment, have similar judgments towards learning and knowledge, and organize education and training activities with similar methods. In addition, in this study, it can be thought that the number of practicing man and woman teachers were close to each other, which caused this result. However, based on the results of similar studies, it can be said that the gender variable does not have a distinctive effect on determining epistemological beliefs. While some studies found a statistical difference in favor of woman practitioners, others found a statistical difference in favor of man practitioners. In some studies, it was stated that there was no difference. Therefore, the gender variable has formed the opinion



that it is not a general determinant while determining the epistemological belief level. When the teachers' epistemological beliefs towards learning were examined according to the variable of professional seniority, it was determined that there was no statistical difference in the whole scale except for the Absolute and Single Reality sub-dimension. In the Absolute and Single Reality sub-dimension, the perception levels of teachers with a seniority of 21 years and above were high. The perception levels of teachers with a seniority of 1-10 years were found to be low.. Kurt (2010), Karhan (2007), Murat and Erten (2018) stated that they found results in similar studies conducted by the professional seniority variable that caused differentiation in the sub-dimensions of the scale. In similar studies in the literature, there are results that there is no statistical difference in the variable of professional seniority. (Biçer, 2019; Ekinci and Tican, 2017; Güngör, 2016; Kaya, 2018; Kaya and Ekici, 2017; Kahramanoğlu and Özbakiş, 2018; Özdemir, 2019; Yıldıztaşı, 2017). Among the reasons for the finding reached in the scale, it can be shown that teachers with a seniority of 21 years and up are more conservative and authoritarian in their educational activities. According to the variable of school type, teachers' perceptions of their epistemological beliefs towards learning did not show a statistically significant difference except for the Absolute and Single Reality sub-dimension and all scales. Considering the mean rank in the Absolute and Single Reality sub-dimension, the perception levels of the teachers working in the primary school were the highest, and the perception levels of the teachers working in the high school were the lowest. When the literature is examined, there are studies in which there are statistical differences in the type of school variable in similar studies in the whole scale and its sub-dimensions. (Fırat, 2016; İzgar and Dilmaç, 2008; Karhan,2007). In addition, there are studies in the literature that the school-type variable does not cause a statistical difference. (Kervan 2017; Şahin, 2021). Among the reasons for the result reached in the scale, it can be shown that the type of school in which they work affects teachers' beliefs about learning and that learning is a concept related to educational levels. The study found that teachers' lifelong learning tendencies were statistically high in both the sub-dimensions of the scale and the overall scale. In the literature, there are other studies in which the lifelong learning tendencies of teachers are found to be high in the lower dimensions of the scale and the overall scale. (Altın, 2018; Akyol, Başaran, and Yeşilbaş, 2018) At the same time, there are studies in the literature that state that teachers find their lifelong learning tendencies at a low level. (Coşkun, 2009; Coşkun and Demirel, 2012; Ekşioğlu, Tarhan and Gündüz, 2017; Gökyer and Türkoğlu, 2018; Tunca, Şahin and Aydın, 2015). Among the reasons for the result obtained in the scale, it can be shown that teachers know that learning does not only take place in the school environment and that the learning-teaching process can continue at any time and place. In addition, it can be thought that teachers are trying to meet their needs to stay up-to-date with the new learning brought by age, with all kinds of learning methods, and their willingness to learn can be shown. According to the gender variable, it was determined that there was no statistical difference in the level of teachers' lifelong learning tendencies in general and sub-dimensions of the scale. In the literature, there are studies supporting this result. (Akyol, Başaran and Yeşilbaş, 2018; Altın, 2018; Ayaz, 2016; Duymuş and Sulak, 2018; Dündar, 2016; Kangalgil and Özgül, 2018). In addition, according to the gender variable in the literature, there are studies where the lifelong learning tendencies of woman teachers are statistically higher than men's. (Aydın, 2018; Ayra, 2015; Coşkun, 2009; Demiralay, and Karadeniz, 2008; Erdoğan, 2014; Gencel, 2013; Gökyer and Türkoğlu, 2018; İzci and Koç, 2012; Karaduman, 2015). At the same time, there are studies in the literature that the lifelong learning tendencies of male teachers are statistically higher than female teachers according to the gender variable. (Ekşioğlu, Tarhan and Gündüz, 2017; Mülhim 2018; Yıldırım, 2015). Among the reasons for the finding reached in the scale, it can be shown that teachers know that learning does not only take place in the school environment, and they believe that the learning-teaching process can continue at any time and in any place. In addition, it can be thought that teachers are trying to meet their needs to stay up-to-date with the new learning brought by age, with all kinds of learning methods, and their willingness to learn can be shown. In addition, based on the results of similar studies, it has been shown that the gender variable is not a determining factor in lifelong learning tendencies.

According to the professional seniority variable, teachers' perceptions of lifelong learning tendencies differed significantly across the Openness to Development and scale. According to these results, it has been determined that there is a statistically significant difference in favor of teachers with 1-10 years of seniority in the Openness to Development sub-dimension between teachers with 1-10 years of seniority and those with 21 years and more seniority. In addition, it was found that the perception levels of teachers with a seniority of 1-10 years were higher on the scale compared to other groups. In a similar study conducted by Yaman (2014), in the group examined in terms of professional seniority variable, it was stated that teachers with 6-10 years of seniority had higher lifelong learning tendencies in all sub-dimensions of the scale. At the same time, Gedik (2019) explained that the variable of professional seniority causes a statistical difference in the lifelong learning tendencies of teachers. These data support the results of the study. However, when the literature is examined, there are also studies where there is no statistical difference when the level of lifelong learning tendencies of teachers is examined in terms of professional seniority

variable. (Akpınar,2020; Altın, 2018; Ayaz, 2016; Doğan and Kavtelek, 2015). Among the reasons for the result reached the professional excitement factor of teachers with a professional seniority of 1-10 years because they have just started the teaching profession, and the approach of retirement time with professional satisfaction of teachers with a professional seniority of 21 years and above can be shown. In addition, it can be considered that teachers with professional seniority of 21 years and above may be experiencing burnout syndrome in the profession. According to the variable of school type, teachers' perceptions of lifelong learning tendencies did not show a statistically significant difference in the sub-dimensions of the scale and the whole scale. In a similar study, Altın (2018) explained that the type of school variable did not cause a statistical difference when determining the level of lifelong learning tendencies. The result obtained supports this finding. In addition, Ayaz (2016) stated that he found a statistical difference according to the school type variable in a similar study. Under these explanations, it has been revealed that the variable of school type is not a determining factor when determining the level of lifelong learning tendencies. Among the reasons for the result obtained, it can be said that the lifelong learning tendencies of the teachers are not affected by the type of school they work in.

According to the results of the analysis, it is seen that there is no statistical relationship between teachers' epistemological beliefs toward learning and lifelong learning tendencies. In addition, while LLTS and EBSL sub-dimensions have a positive and moderate relationship with the Access to Information sub-dimension, there is a fragile and negative significant relationship in the Against Genetic Nature sub-dimension. However, it has been determined that there is a weak and negative significant relationship between the LLTS and the EBSL sub-dimensions, Willingness to Learn, and Openness to Development sub-dimensions. ( $p < ,01$ ). At the same time, there is a moderate and positive relationship between the Access to Information sub-dimension and the Openness to Development sub-dimension and the Willingness to Learn sub-dimension and a fragile and negative relationship between the Against Genetic Nature sub-dimension and the Willingness to Learn and Openness to Development sub-dimensions. It was also found that there is a relationship in the direction of. In a similar study conducted by Arslan (2017), he examined healthcare professionals' epistemological beliefs and lifelong learning tendencies. He stated that according to the results he reached, he found a positive or moderate relationship between the epistemological beliefs of healthcare professionals and their lifelong learning tendencies. Taş (2020) examined the relationship between teachers' lifelong learning tendencies and idealism levels in his similar study and stated that he found a low positive correlation between the scales. In the same study, the relationship between the sub-dimensions of the scales was also examined. He explained that he found a moderate and positive relationship between the Motivation and Persistence sub-dimensions of the LLT Scale and the teachers' idealism levels. As a result of the analysis, it was determined that there was no relationship between the scales, and it can be said that the attitudes of teachers towards new learning are not affected by the attitudes they have gained through old learning and that they are always willing for new learnings. In addition, it can be shown that the characteristic attitudes of the geographical region where they work affect the individuals' lives. As a result, there are changes in the attitudes of the individuals.

## Results, Conclusions and Recommendations

As a result of the study, it was determined that the epistemological belief levels of teachers towards learning were at a medium level, and their lifelong learning tendencies were at a high level. From this point of view, to increase teachers' epistemological beliefs towards learning, which is one of the essential elements of educational activities, to a high/very high level, Information studies should be conducted about the effects of our epistemological beliefs on our daily lives.

In-service activities and seminars can be organized to benefit from technological developments, new education models, and new information systems to exhibit a teacher profile equipped to meet the needs of the age. Other studies to be carried out from different provinces and districts will be helpful for comparison of studies. Increasing the number of sample groups makes it more likely to disseminate the studies to be carried out. Qualitative or mixed methods can be preferred to collect more comprehensive data on epistemological beliefs towards learning and lifelong learning tendencies.

## References (APA 6)

- Adak, F. ve Bakır, S. (2017). Fen bilimleri öğretmenleri ve öğretmen adaylarının gözüyle bilimin doğası. *Çukurova Üniversitesi Eğitim Fakültesi Dergisi*, 46(2), 472-503. doi: 10.14812/cuefd.273857
- Altın,S. (2018). *Ortaöğretim öğretmenlerinin yaşam boyu öğrenme eğilimlerinin incelemesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 527089).

- Akpınar, Ş. (2020). *Öğretmenlerin yaşam boyu öğrenme eğilimleri ile iyilik hali ve özyeterlik inancı arasındaki ilişkinin incelenmesi: Afyonkarahisar ili örneği* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 627767).
- Akyol, B., Başaran, R. ve Yeşilbaş, Y. (2018). Halk eğitim merkezlerine devam eden kursiyerlerin yaşam doyum düzeyleri ve yaşam boyu öğrenme eğilimleri. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 48, 301-324. Erişim adresi: <https://dergipark.org.tr/tr/pub/maeuefd/issue/39596/412680>
- Akyıldız, S. (2014). *Lise öğretmenlerinin epistemolojik inançları ile öğretim-öğrenme anlayışları arasındaki ilişkinin incelenmesi* (Doktora tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 383506).
- Arslan, Ş. F. (2017). *Hekimlerin, tıp fakültesi öğrencilerinin ve öğretim üyelerinin epistemolojik inançları ve yaşam boyu öğrenme eğilimlerinin incelenmesi* (Doktora tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 468746).
- Aslan, S. (2017). Sınıf öğretmenlerinin eğitim inançlarının çeşitli değişkenler açısından incelenmesi. *Kastamonu Eğitim Dergisi*, 25(4),1453-1468. Erişim adresi: <https://dergipark.org.tr/tr/pub/kefdergi/issue/30766/332490>
- Avrupa Komisyonu. (2007). Directorate-general for education and culture. KeyCompetences for Lifelong Learning European Reference. Framework,Brussels, Belgium, EC Lifelong Learning Programme. [https://www.ab.gov.tr/files/ardb/evt/1\\_avrupa\\_birligi/1\\_4\\_zirandler\\_1985\\_sonrasi/2007\\_12\\_bruksel\\_zirandsi\\_baskanlik\\_sonuc\\_bildirgesi\\_en.pdf](https://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_4_zirandler_1985_sonrasi/2007_12_bruksel_zirandsi_baskanlik_sonuc_bildirgesi_en.pdf)
- Ayaz, C. (2016). *Öğretmenlerin yaşam boyu öğrenme eğilimlerinin bazı değişkenler açısından incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 421733).
- Aydın, B. (2018). *Sınıf öğretmeni adaylarının yaşam boyu öğrenme eğilimleriyle kariyer geliştirme arzuları arasındaki ilişki* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 519188).
- Ayra, M. (2015). *Öğretmenlerin yaşam boyu öğrenme eğilimlerinin mesleki öz yeterlik inançları ile ilişkisi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 412297).
- Başer Gülsoy, V. G., Erol, O. ve Akbay, T. (2015). Secondary school öğrencilerinin bilimsel epistemolojik inançlarının farklı değişkenlere göre incelenmesi. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 1(35),1-28. Erişim adresi: <https://dergipark.org.tr/tr/pub/maeuefd/issue/19408/206386>
- Berberoğlu, B. (2010). Yaşam boyu öğrenme ile bilgi ve iletişim teknolojilerin açısından Türkiye'nin Avrupa Birliği'ndeki konumu. *Bilgi Ekonomisi ve Yönetimi Dergisi*, 5(2). Erişim adresi: <https://dergipark.org.tr/tr/pub/beyder/issue/3477/47311>
- Biçer, Y. G. (2019). *Okul yöneticilerinin epistemolojik inançları ile politik beceriler arasındaki ilişki*. (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 580242).
- Buehl, M. M. (2003, Nisan). At the crossroads: Exploring the intersection of epistemological beliefs, motivation, and culture. Paper presented at the annual meeting of the American Educational Research Association. Erişim adresi: <https://www.redalyc.org/pdf/2931/293121940009.pdf>
- Coşkun, Y. D. (2009). *Üniversite öğrencilerinin yaşam boyu öğrenme eğilimlerinin bazı değişkenler açısından incelenmesi* (Doktora Tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 258438).
- Coşkun, Y. D. ve Demirel, M. (2012). Üniversite öğrencilerinin yaşam boyu öğrenme eğilimleri. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 42, 108-120. Erişim adresi: <https://dergipark.org.tr/tr/pub/hunefd/issue/7794/102006>
- Çüçen, K. A. (2001). Bilgi Felsefesi. Bursa: Asa Kitabevi.
- Demiralay, R. ve Karadeniz, Ş. (2008). İlköğretimde yaşam boyu öğrenme için bilgi okuryazarlığı becerilerinin geliştirilmesi. *Journal of Educational Sciences*, 3(2):89-119. Erişim adresi: <https://www.academia.edu/35528936>
- Deryakulu, D. (2006). *Epistemolojik İnançlar*. Kuzgun ve diğerleri (Ed), Eğitimde Bireysel Farklılıklar (ss.259–287). Ankara: Nobel Yayın-Dağıtım.
- Deryakulu, D. ve Büyüköztürk, Ş. (2005). Epistemolojik inanç ölçeğinin faktör yapısının yeniden incelenmesi: Cinsiyet ve öğrenim görülen program türüne göre epistemolojik inançların karşılaştırılması. *Eğitim Araştırmaları*, 5(18), 57–70. Erişim adresi: <https://app.trdizin.gov.tr/makale/TkRZeE5EVTE>
- Doğan, S. ve Kavtelek, C. (2015). Hayat Boyu Öğrenme Kurum Yöneticilerinin Hayat Boyu Öğrenme Kavramına İlişkin Görüşleri: Hayat Boyu Öğrenme için Bir Metafor Analizi. *Yükseköğretim ve Bilim Dergisi*, 5(3), 292-303. Erişim adresi: <https://dergipark.org.tr/tr/pub/higheredusci/issue/61508/918480>
- Duymuş, Y ve Sulak, S. (2018). Öğretmen adaylarının yaşam boyu öğrenme eğilimleri üzerinde lisans, eğitimi, cinsiyet ve bölümün etkisi. *Sınırsız Eğitim ve Çalışma Dergisi*, 3(2), 58-74. Erişim adresi: <https://dergipark.org.tr/tr/pub/sead/issue/38624/427723>
- Dündar, H. (2016). *Sınıf Öğretmeni Adaylarının Yaşam Boyu Öğrenme Eğilimlerinin İncelenmesi* (Yüksek Lisans Tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 418226).

- Ekinci, N. ve Tican, C. (2017). Sınıf öğretmenlerin epistemolojik inançları ve düşünme becerilerinin öğretimine yönelik sınıf içi uygulamaları. *Itobiad: Journal of the Human & Social Science Researches*,6(3), 1748-1773. Erişim adresi: <http://www.itobiad.com/tr/download/article-file/337634>
- Ekşioğlu, S., Tarhan, S. ve Çetin Gündüz, H. (2017). Yaşam boyu öğrenme eğilimleri ile özyeterlilik beklentisi ve kişilik özellikleri arasındaki ilişkinin incelenmesi. *Kastamonu Eğitim Dergisi*, 25(5), 1925-1940. Erişim adresi: <https://dergipark.org.tr/tr/pub/kefdergi/issue/31226/342918>
- Erdoğan, D. G. (2014). *Öğretmen adaylarının yaşam boyu öğrenme eğilimlerine etki eden faktörler* (Doktora tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 384700).
- Erdoğan, G. D. ve Arsal, Z. (2016). The deandlopment of lifelong learning trends scale. *Sakarya University Journal of Education*, 6(1), 114-122. Erişim adresi: <https://dergipark.org.tr/tr/pub/suje/issue/20641/220131>
- Fırat, F. (2016). *Okulların akademik iyimserlik düzeyinin öğretmenlerin epistemolojik inançları ve bazı değişkenler açısından incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:430679).
- Fuller, S. (2002). *Social epistemology*. Indiana University Press.
- Gedik, G. (2019). *Sınıf öğretmenlerinin yaşam boyu öğrenme eğilimlerinin incelenmesi* (Manisa- Demirci ilçesi örneği) (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:557454).
- Gencel, İ. E. (2013). Öğretmen adaylarının Yaşam Boyu Öğrenme yeterliklerine yönelik algıları. *Eğitim ve Bilim Dergisi*, 38(170), 237-252. Erişim adresi: <http://egitimandbilim.ted.org.tr/index.php/EB/article/viewFile/1847/558>
- Gökçer, N. ve Türkoğlu, İ. (2018). Üniversite öğrencilerinin Yaşam Boyu Öğrenme Eğilimleri. *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 28(2), 125-136. Erişim adresi: <https://dergipark.org.tr/tr/download/article-file/537279>
- Güngör, N. B. (2016). *Beden eğitimi öğretmen adaylarının epistemolojik inançları ile liderlik özellikleri arasındaki ilişkinin incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:419343).
- Haseski, H. İ., Odabaşı H. F. ve Kuzu, A (2015). *Türkiye’de Yaşam Boyu Öğrenme ve Yansımaları*. Akkoyunlu ve diğerleri (Ed.), Eğitim Teknolojileri Okumaları. Ankara: Ayrıntı Basım ve Yayın.
- Hofer, B.K. (2001). Personal epistemology research: Implications for learning and teaching. *Journal of Educational Psychology Review*, 13, 353-383. Erişim adresi: [https://www.researchgate.net/publication/226743145\\_Personal\\_Epistemology\\_Research\\_Implications\\_for\\_Learning\\_and\\_Teaching](https://www.researchgate.net/publication/226743145_Personal_Epistemology_Research_Implications_for_Learning_and_Teaching)
- İçen, M. (2012). *Sosyal bilgiler öğretmenlerinin epistemolojik inançlarının sınıf içi uyguladıkları öğretim stratejileri ile ilişkisi* (Doktora tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 320301).
- İzci, E. ve Koç, S. (2012). Öğretmen adaylarının yaşam boyu öğrenmeye ilişkin görüşlerinin değerlendirilmesi. *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (9), 101-114. doi: 10.14520/adyusbd.267
- İzgar, H. ve Dilmaç, B. (2008). Yönetici adayı öğretmenlerin özyeterlilik algıları ve epistemolojik inançların incelenmesi. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 20, 437-446. Erişim adresi: <http://dergisosyalbil.selcuk.edu.tr/susbed/article/view/377/359>
- Kahramanoğlu, R. ve Özbakış, G. (2018). Sınıf öğretmenlerinin eğitim inançlarının ve epistemolojik inançlarının belirlenmesi ve arasındaki ilişkinin incelenmesi. *Disiplinlerarası Eğitim Çalışmaları Dergisi*, 2(3), 8-27. Erişim adresi: <https://dergipark.org.tr/tr/pub/jier/issue/39294/434471>
- Kaleci, F. (2012). *Matematik öğretmen adaylarının epistemolojik inançları ile öğrenme ve öğretim stilleri arasındaki ilişki* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:321182).
- Kangalgil, M. ve Özgül, F. (2018). Beden Eğitimi ve Spor Eğitimi Alan Öğrencilerin Yaşam Boyu Öğrenme Eğilimlerinin İncelenmesi. *Journal of Global Sport and Education Research*, 1(1),64-72. Erişim adresi: <https://dergipark.org.tr/tr/pub/jogser/issue/41903/498397>
- Karaduman, A. (2015). *Üniversite öğrencilerinin yaşam boyu öğrenme eğilimleri ile özyeterlilik algıları arasındaki ilişki* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 421728).
- Karasar, N. (2017). *Bilimsel Çalışma Yöntem: Kavramlar İlkeler Teknikler*. Ankara: Nobel.
- Karhan, İ. (2007). *İlköğretim okullarında görev yapan öğretmenlerin epistemolojik inançlarının demografik özelliklerine ve bilgi teknolojilerini kullanma durumlarına göre incelenmesi*. (Doktora tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 219319).
- Kaplan, A. Ö. (2006). *Fen bilgisi öğretmen adaylarının epistemolojik inanışlarının okul deneyimi and öğretmenlik uygulamasındaki yansımaları: Durum çalışması* (Doktora tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 191708).

- Kaya, K. (2018). *Öğretmenlerin bilimsel epistemolojik inançları ile yaşam boyu öğrenme yeterlikleri arasındaki ilişki*. (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 511929).
- Kaya, E.ve Ekici M. (2017). Sosyal bilgiler öğretmenlerinin epistemolojik inançları ve öğretim stillerinin çeşitli değişkenler açısından incelenmesi. *İlköğretim Online*, 16(2), 782-813. Erişim adresi: <https://dergipark.org.tr/tr/pub/ilkonline/issue/28560/304735>
- Kervan, S. (2017). *Öğretmenlerin çok kültürlü eğitime yönelik tutumları ile epistemolojik inançları ve öğretim yaklaşımları* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:475367).
- Kızıklı, G. (2016). *Bilimsel epistemolojik inançlar, TEOG sınavına ilişkin tutumlar ve TEOG başarısı arasındaki ilişkilerin analizi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:456771).
- Kurt, C. B (2010). *Öğretmenlerin epistemolojik inançları ve değişime direnme tutumları arasındaki ilişkilerin incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 277976).
- Kurt, F. (2009) *Inandstigating Students' Epistemological Beliefs Through Gender, Grade Leandl, and Fields of Study* (Yüksek Lisans Tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:250701).
- Kutluca, A. Y., Soysal, Y. ve Radmard, S. (2018). Öğrenmeye Yönelik Epistemolojik İnançlar Ölçeğinin Uygulamalı Olarak Uyarlama, Geçerlik ve Güvenirlik Çalışması. *Eğitimde Kuram ve Uygulama*, 14(2), 129-152. doi: 10.17244/eku.335287
- Meral, M. ve Çolak, E. (2009). Öğretmen adaylarının bilimsel epistemolojik inançlarının belirlenmesi. *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi*, 27, 129-146. Erişim adresi: <https://app.trdizin.gov.tr/makale/TORrNE5EazU>
- Murat, A. ve Erten, H. (2018). Fen Bilgisi Öğretmenlerinin Epistemolojik İnançlarının Çeşitli Değişkenlere Göre Değerlendirilmesi. *Turkish Journal of Educational Studies*, 5(2), 38-63. doi: 10.33907/turkjes.39922420:59
- Mülhim, M. A. (2018). *Beden eğitimi ve spor yüksekokulu öğrencilerinin bireysel yenilikçilik düzeyleri and yaşam boyu öğrenme eğilimlerinin incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 530583).
- Özdemir, İ. (2019). *Lise öğretmenlerinin epistemolojik inançları ile öğretim stilleri arasındaki ilişkinin incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 573156).
- Pan, V. L. (2016). İngilizce Öğretmen Adaylarının Epistemolojik İnançlarının ve Çalışma Süreçlerinin Çeşitli Değişkenler Açısından İncelenmesi. *Uluslararası Sosyal Çalışmalar Dergisi*, 9(45), 650-662. Erişim adresi: <https://www.researchgate.net/publication/307439958>
- Rogers, E.M. (1995). *Diffusion of innovations (Third Edition)*. New York: Free Press.
- Sadıç, A. ve Çam, A. (2015). 8.sınıf öğrencilerinin epistemolojik inançları ile pisa başarıları ve fen ve teknoloji okuryazarlığı. *Journal of Computer and Education Research*,3(5), 18-49. doi 10.18009/jcer.63730.
- Satmaz, A. (2019). *8. sınıf öğrencilerinin fen bilimlerindeki başarılarının bilimsel epistemolojik inançlarına and cinsiyetlerine göre incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:542419).
- Schommer, M. (1994). Synthesizing epistemological belief research: Tentatiand understandings and provocatiand confusions. *Educational Psychology Review*, 6(4), 293-319. doi:10.1007/BF02213418
- Seitz, R. J., Paloutzian, R. F., & Angel, H. F. (2016). Processes of believing: Where do they come from? What are they good for?. *F1000Research*, 5, 2573. <https://doi.org/10.12688/f1000research.9773.2>
- Şahin, N. (2021). *Kamu okullarında görevli öğretmenlerin bilimsel epistemolojik inançlarının bazı değişkenler açısından incelenmesi* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 681970).
- Taş, B. (2020). *Öğretmenlerin idealistlik düzeyleri ile yaşam boyu öğrenme eğilimleri arasındaki ilişki* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 635353).
- Topçu, M. S. and Yearsmaz-Tüzün, O. (2009). Elementary students" metacognition and epistemological beliefs considering science achieandment, gender and socioeconomic status. *İlköğretim Online*, 8, 676-693. Erişim adresi:<https://www.researchgate.net/publication/228343186>
- Tunca, N., Alkın Şahin S. and Aydın, Ö. (2015). Öğretmen adaylarının yaşam boyu öğrenme eğilimleri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 11(2), 432-446. Erişim adresi: <https://dergipark.org.tr/tr/download/article-file/161105>
- Yaman, F. (2014). *Öğretmenlerin yaşam boyu öğrenme eğilimlerinin incelenmesi: Diyarbakır ili örneği* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No:357629).
- Yenilmez, K. and Balbağ, M. Z. (2016). Fen bilgisi and ilköğretim matematik öğretmeni adaylarının STEM'e yönelik tutumları. *Journal of Research in Education and Teaching*, 5(4), 301-307. Erişim adresi: [http://www.jret.org/FileUpload/ks281142/File/30a.kursat\\_yenilmez.pdf](http://www.jret.org/FileUpload/ks281142/File/30a.kursat_yenilmez.pdf)
- Yıldırım, G. (2015). *Epistemolojik İnanç Ölçeği'ne göre ilkokul ve ortaokul öğretmenlerinin resmi müfredata ilişkin görüşleri* (Yüksek lisans tezi). YÖK Tez Merkezi veri tabanından erişildi (Tez No: 426181).



Yıldıztaşı, M. B. (2017). *Politik beceri ile örgütsel tükenmişlik ilişkisinin ortaokul öğretmenlerinin görüşlerine göre incelenmesi (Yalova ili örneği)* (Yüksek Lisans Tezi). YÖKTEZ Tez Merkezi veri tabanından erişildi (Tez No: 454918).