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A Comparative Analysis of The Elementary and Branch Teachers' Lifelong Learning Competences and Their Individual Innovativeness Levels According to Certain Variables*

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Article Type: Research Article
Received Date: 17.10.2022
Accepted Date: 28.02.2023
Published Date: 31.03.2023
Plagiarism: This article has been reviewed by at least two referees and scanned via a plagiarism software
Doi: 10.29329/tayjournal.2023.537.06

Citation: Abbak, Y., & Demir-Başaran, S. (2023). A comparative analysis of the elementary and branch teachers' lifelong learning competences and their individual innovativeness levels according to certain variables. *Türk Akademik Yayınlar Dergisi (TAY Journal), 7*(1), 103-132.

*This study was driven from master's thesis submitted by the first author in 2018 in Erciyes University, Institute of Education Sciences.

Abstract

The purpose of this study is to investigate lifelong learning competencies and individual innovativeness levels of elementary teachers and teachers in various fields applying a comparative analysis. Teachers' lifelong learning competencies and individual innovativeness levels have also been examined in terms of gender, marital status and seniority variables. The study is conducted in a city from five different districts in Turkey and the study is a survey model. The sample consists of 718 teachers, 350 classroom teachers and 368 teachers in other realms. The data of the research have been collected by using the "Key Competencies Scale in Lifelong Learning" and the "Individual Innovation Scale". The data of the research have been collected through using the "Key Competencies Scale in Lifelong Learning" and the "Individual Innovation Scale". SPSS program has been used for the analysis of the data collected in the study. The findings show that the lifelong learning competency perceptions of all teachers are above the average and at a sufficient level, and both groups are in the moderately innovative and early majority category. It is concluded that there was no significant difference between the individual innovativeness levels and lifelong learning competencies regarding all teachers.

Keywords: Lifelong learning, individual innovativeness, teachers

Introduction

Humanity, which continues to improve itself continuously, has now transitioned from an information society to a "super smart society" with the effect of artificial intelligence supported by applications, technologies and digitalization, and therefore, the skills expected from individuals have changed considerably when compared to previous periods (Karataş, 2021). These dynamic transformations in the modern world, the rapid development of innovative technologies and the accumulation of knowledge have led to the adoption of the concept of "lifelong education" instead of the traditional "limited" education that has existed for centuries (Rybakina, 2018). Information that is incessantly out of date has urged the need for learning in individuals, causing the existing skills to be questioned (Akkoyunlu, 2008; Aksoy, 2008). Moreover, with globalization, it has been realized that education cannot be limited to a certain place or period and that individuals have the opportunity to learn and keep up with the changes constantly. Therefore, a lifelong learning approach has emerged that requires innovative transfers in education as well as the inclusion of the people from all walks of society (Belousova et al.,2017; Erdamar Koç, 2011; Göğebakan Yıldız, 2017).

The concept of lifelong learning, which is thought to date back to John Dewey, actually goes back much further, and Aristotle and Plato defined learning as a lifelong process (Bosco, 2007). The European Commission (2002) defined the benchmarks of lifelong learning as the individuals' participation in all activities to develop their knowledge, skills, and competences as long as they continue their life to fulfill their personal, social or professional goals. It is emphasized that countries adopting the philosophy of lifelong learning in education develop in terms of innovation and progress (Organisation for Economic Co-operation and Development,2012). Furthermore, it is seen that innovations mitigate the inequalities among individuals and equalize their economic values by creating new employment settings (Mercik, 2015). Like innovativeness, lifelong learning leads to the improvement and equality of opportunities (Manea, 2015). Equality of opportunity in education is possible by ensuring that all members of the society access innovation and information equally (Callinicos, 2014; Mercik, 2015).

Developed societies aspire to enhance the quality of education and raise creative, entrepreneurial, innovative, and confident individuals (Coolahan, 2002). In addition, individuals who

make up the society are expected to have lifelong learning skills, be open to new ideas and demonstrate innovative skills (Partnership for 21st Century Skills, 2003; Rogers, 1995). Lifelong learners were identified as ones who were curious, open to new developments and innovations (Collins, 2009). The concept of "innovation", defined as "the desire for innovation and change, the ability to adapt" (Rogers, 1995; p. 242), is among the lifelong learning skills expected from people in the 21st century. It is found that there is a strong relationship among innovativeness and learning, creativity and innovativeness. Innovativeness refers to a construct emerged from the concept including interaction of learning, creativity, and innovativeness (Palazzo, 2005). On the other hand, individual innovativeness refers to the individual's willingness to be open to innovativeness, its adoption, development, and exploitation with a positive perspective towards it (Kılıçer, 2011; Yuan & Woodman 2010). In order to raise innovative individuals, it is crucial to introduce individuals with the concepts such as innovativeness, entrepreneurship, and creativity at an early age and sustain their inclusion at every stage of education (Elçi, 2006). In this context, since living, learning, working styles, and qualifications are constantly changing, ongoing learning and following innovations are seen as qualities that individuals should have. Moreover, it becomes a necessity to organize educational institutions and programs accordingly and enhance teacher qualifications to ensure that individuals grow up with the determined qualifications. Schools are a part of the society that has a high potential for its development (Lasser & Fite, 2011). Educational practitioners, who are at the center of change, need to constantly keep up with innovations, in that there is a strong relationship between teacher development and innovativeness (Fullan & Pomfret, 1977).

In education, it is of great importance to adopt emerging innovations in accordance with the community's cultural and social circumstances. And also, during implementation, it is vital to develop existing approaches, accelerate the development and ground them on innovative ideas. The term innovativeness in education includes behavioral changes in teachers, families, students, and administrators (Demir-Başaran & Keleş, 2015). The success of a new method in education depends on the competence of the personnel responsible for education, having an insight into the learning competence of learners, and the appropriate use of innovative technology. They all help learners overcome the process of acquiring knowledge and become lifelong learners (Margaret, Kavitha, Amrutha, 2015). When innovativeness is evaluated in terms of the use of information and communication technologies during education, it is closely related to teachers' competencies in how to incorporate innovative technologies into the teaching process (Uşun, 2006). In this sense, while technologies and materials are supportive tools in the learning-teaching process, benefitting from them in the elementary environment has become an asset that teachers should acquire by following the rapid changes in technology (Kaya, 2006). The role of the teacher, who is seen as the representative of change, becomes more evident than ever before in the 21st century and the value of teachers is emphasized because the quality of teaching is very important (UNESCO, 1996). In today's world, the roles of teachers are becoming more and more critical and multifaceted. Because teachers are seen in a position to combine social, behavioral, civic, economic and technological dimensions (European Commission Study Group, 1997, p. 131, cited in Coolahan, 2002).The role of the teacher has now evolved from the role of teaching assistant to the role of developer (Dzhurylo, Shparyk, 2019). However, all this is possible only if teachers are innovative, encouraging, and lifelong learners (Coolahan, 2002). Teachers will gain new knowledge and experience through lifelong learning (Kusner, 2018). Considering the interaction between teachers and students, –for students who keep their teachers under constant observation

seeing teachers who can adopt innovations and apply them to their lives is a very good example of promoting lifelong learning (Fullan & Pomfret, 1977).

Lifelong learning is a mainstream view that will guide future educational developments (You & Li, 2010). When this phenomenon is examined in the context of Turkey, studies reveal that individuals' awareness and participation in lifelong learning are low, and they draw attention to the weakness of the learning culture in Turkey (MEB, 2014). Some studies conducted in Turkey exhibit that lifelong learning (Diker Coşkun 2009; Gökyer, 2019; Güloğlu-Demir, 2022; Tunca et al.,2015) and innovativeness (Atalay Altaş, 2021; Beşkaya, Çelik & Yılmaz, 2015; Demir & Demir, 2023; Kılıç, 2015; Yenice & Alpak-Tunç, 2019; Yılmaz 2013) levels of teachers, prospective teachers, and administrators are inadequate. In addition, there are some studies conducted in which participants' lifelong learning (Adabaş, 2016; Akçay, 2021; Altıntaş, 2022; Aydın & İflazaoğlu Saban, 2021; Gök, 2022; Gökbulut**,** 2021**;** Karakuş, 2013; Kazu & Erten, 2016; Özgür, 2016, Pınarcık et al. 2016, Yavuz Konakman & Yanpar Yelken, 2014; Yıldırım, 2021) and innovativeness levels (Akgün, 2017; Atılgan & Tükel, 2021; Beşkaya, Çelik & Yılmaz, 2015; Bitkin, 2012; Demir Başaran & Keleş, 2015;Keskin, 2021; Kılıç, 2015; Mülhim, 2018;Yıldırım, 2021) were determined at high or moderate levels. The inconsistency of the results and the scarcity of studies on the relationship between lifelong learning and innovativeness (Kılıç, 2015; Yenice & Alpak Tunç, 2019, Yıldırım, 2021) indicate the necessity of new research that will cover this topic. Teachers' incorporation of educational practices into their lessons is instrumental in the formation of societies with lifelong learning and innovativeness mindset (Evin Gencel, 2013; Xu & Chen, 2010). For this reason, teachers should be open to innovation and change and have lifelong learning competencies. In this context, this research aims to unfold the lifelong learning competences and innovativeness levels of teachers who play a key role in the formation of a sophisticated society. To this end, teachers' lifelong learning competences and innovativeness levels have been investigated in terms of gender, seniority, educational and marital status variables and comparative analysis of the elementary and branch teachers'. As Rogers (2003) stated, individuals' perspectives on innovation and their levels of acceptance differ. There is an important relationship between lifelong learning and innovation; the indisputable role of teachers in being innovative and life-long learning societies and for students who take their teachers as role models from an early age; It is considered important to compare the branch teachers that they would continue to take as an example in applying or internalizing the situations they took as an example in their next education life. Because, it is thought that it will be valuable in terms of Turkish literature, that the research in question will provide clues in determining the lifelong learning and innovation levels of both teacher groups and in making measures or improvements in this context. For this reason, primary school teachers and branch teachers have been compared in the study. In this sense, the research findings are significant in terms of improving teachers' lifelong learning skills and unfolding their innovative capacity. Moreover, this study elaborates on the importance of teacher education in the creation of a contemporary and innovative society that fosters lifelong learning. It is also significant in terms of determining the needs and creating a research area for in-service training and higher education. Thus, the following questions were asked to be answered.

1. What are elementary teachers' individual innovativeness levels and lifelong learning competences?
2. Do elementary teachers' individual innovativeness levels and lifelong learning competences differ in terms of gender, seniority, and marital status?

3. What are the individual innovativeness levels and lifelong learning competences of branch teachers?

4. Do branch teachers' individual innovativeness levels and lifelong learning competences differ in terms of gender, seniority, and marital status?

5. Do elementary and branch teachers differ in terms of individual innovativeness levels and lifelong learning competences?

Method

Research Design

In this study, surveys have been used to examine the lifelong learning competences and individual innovativeness levels of elementary and branch teachers. Using surveys is an approach that aims to describe the past or present situation of the research subject. In addition, in the survey model, it is concerned with how the views and characteristics are distributed in terms of the individuals in the sample, rather than why they originate (Fraenkel & Wallen, 2006; Karasar, 2002). In this context, teachers' lifelong learning competences and individual innovativeness levels have been tried to be revealed in the study.

Participants and Procedure

The universe of this research consists of 3967 classroom teachers and 8581 branch teachers working in the central districts of Kayseri. (Melikgazi, Kocasinan, Talas, Hacılar, & İncesu). The stratified random sampling technique was preferred in this study because the research population is large and it is easy to divide into sub-populations in terms of variables. The stratified random sampling technique is a method used in cases where the scope is very large and difficult to reach the whole population. Besides, certain subgroups or strata are selected at the same rate as in the population (Fraenkel & Wallen, 2006). In order to determine the sample in this study, the participants were divided into two sub-strata according to the class and branch teachers working in the central districts. The number of samples selected from the general population was determined as 718, with a reliability range of .95 and a margin of error of 5% according to the number of populations.

As a result, 368 branch teachers and 350 elementary teachers were included in the sample. According to the statistical information obtained from the Provincial Directorate of National Education in these central districts in the 2016-2017 academic year, the number of branch teachers (secondary and high school) working in Melikgazi is 4532, in Kocasinan 2948, in Talas 776, in İncesu 189, in Hacılar 136 and 8581 in total. Since the stratified random sampling method was used in the study, the proportional and numerical distribution of branch teachers by districts was determined as follows: Melikgazi 53% (195), Kocasinan 34% (125), Talas 9% (33), Hacılar 2% (7), İncesu 2% (7). The total number of elementary teachers working in the central districts is 3967; 1871 in Melikgazi, 1484 in Kocasinan, 431 in Talas, 110 in İncesu, 71 in Hacılar. It has been calculated that the total number of elementary teacher samples from these districts, which are thought to represent the population, should be 350. Proportional and numerical distribution of elementary teachers by districts was determined as Melikgazi 47% (165), Kocasinan 37% (130), Talas 11% (39%), İncesu 3% (11), and Hacılar 2% (7).

Table 1. *Demographic characteristics of the participating elementary and other teachers.*

Variables	Categories	N	%
Gender	Female	360	50,1
	Male	358	49,9
Seniority	1-5 years	91	12,7
	6-10 years	123	17,1
	11-15 years	122	17,0
	16-20 years	179	24,9
	21 years and over	203	28,3
Marital Status	Married	626	87,2
	Single	92	12,8
Education Level	Bachelor's Degree	637	88,7
	Postgraduate	81	11,3
Total		718	100

Data Collection Tools

The Scale of Key Competences for Lifelong Learning (SKCLLL)

In the study, two different scales were used. *The Scale of Key Competences for Lifelong Learning (SKCLLL)* with eight sub-dimensions and 23 items of the five-point Likert scale, developed by Şahin, Akbaşlı, and Yanpar Yelken (2010) was utilized. The sub-dimensions of the scale consist of eight dimensions including communicative competence in mother tongue, proficiency in foreign languages/languages, mathematical and basic competences in science and technology, digital competence, competence in learning to learn, language proficiency, social citizenship awareness, taking initiative, competence in entrepreneurship, and competence in cultural awareness and expression. The lowest score that can be obtained from the scale is 23, and the highest score is 115. The Cronbach Alpha reliability coefficient of the scale was calculated as .75. However, the reliability of the scale was recalculated in this study and the Cronbach Alpha reliability coefficient was calculated as .83.

Individual Innovation Scale

Another scale used in the study is the 5-point Likert-type Individual Innovativeness Scale, which consists of 20 items developed by Hurt, Joseph, and Cook and adapted into Turkish by Kılıçer and Odabaşı (2010). The reliability coefficient of the scale was found as .88, the internal consistency coefficient as 0.82, and the test-retest reliability was 0.87. 12 of the items that make up the scale are positive (1, 2, 3, 5, 8, 9, 11, 12, 14, 16, 18, and 19 items), and 8 of them are negative items (4, 6, 7, 10), 13, 15, 17, and 20). However, the reliability of the scale was recalculated in this study and the Cronbach Alpha reliability coefficient was calculated as .83. With the help of the scale, the innovativeness score is calculated by adding 42 points to the score obtained by subtracting the total score from the negative items taken from the total score obtained from the positive items. According to this formula, the lowest 14 and the highest 94 points can be obtained.

Table 2. *Evaluation criteria of teachers' individual innovativeness levels*

Evaluation Range	Evaluation Criteria
81 and over	Innovator
Between 69 and 80	Early Adopters
Between 57 and 68	Early Majority
Between 47 and 56	Late Majority
46 and under	Laggards

Table 2 presents the evaluation criteria according to the scores of the participants. In addition, if the individual innovativeness score of the participants is higher than 68 points, they are considered

highly innovative, between 68 and 64 points as moderately innovative, and below 64 points as low innovative (Hurt, Joseph, & Cook, 1977).

Data Collection and Analysis Process

For the scales used in the research to be applied at schools, after the necessary permissions were obtained by applying to the Kayseri Provincial Directorate of National Education, the first researcher went to the designated schools, then distributed and collected the forms by hand. 740 teachers were involved in the research, but during the analysis of the collected data, 22 forms were deemed invalid as the participants did not respond to all questions and the random answers given to the control question were noticed. As a result of this situation, 718 forms were included in the evaluation process and analyzes were carried out on this number of data.

In data analysis the SPSS program was used. To find the differences among the variables, t-test for Independent Groups and One-Way Analysis of Variance (ANOVA) were used for parametric data while Mann Whitney U Test, Kruskal Wallis Test, and TUKEY test were applied for independent groups for nonparametric data, and descriptive statistics were also used.

Research Ethics

This research was carried out with the approval of Kayseri Provincial Directorate of National Education, Ethics Committee for Researches with the decision numbered "94025929-605-E.12465993" in the session dated 04.11.2016.

Findings

After analyzing the data collected from the participants within the scope of the research, tables and findings are included within each research question in this section.

Findings related to individual innovativeness levels and lifelong learning competences of elementary teachers

The first question of the research *What are the individual innovativeness levels and lifelong learning competences of elementary teachers?* was formulated. Firstly, the general results of the elementary teachers' innovativeness levels and lifelong learning competences, and then the descriptive statistical results of the sub-dimensions of both scales are included.

Table 3. *Scores of elementary teachers' individual innovativeness levels and their lifelong learning competences*

Variables	N	$\bar{X}$	Min.	Max.	SD
Individual Innovativeness	350	67,33	30	93	9,965
Lifelong learning competences	350	87,67	44	114	10,284

Table 3 shows that the highest score of the elementary teachers on the individual innovativeness scale is 93 and the lowest score is 30. The elementary teachers are in the "moderate innovator" category with their $\bar{X}$= 67.33 individual innovativeness point averages and "early majority" category within the individual innovativeness categories. On the other hand, the lowest score of the elementary teachers on the lifelong learning competences scale is 44.00 and the highest score is 114.00. The score they obtain from the general average is $\bar{X}$= 87.67. Elementary teachers' lifelong learning competences are at an *"adequate"* level.

Table 4. *Elementary teachers' scores regarding innovativeness categories*

Innovativeness Categories	N	(%)	Min.	Max.	$\bar{X}$	SD
Innovators	28	8,00	81	93	85,39	4,425
Early Adopters	135	38,571	69	80	73,73	3,591
Early Majority	139	39,714	57	68	62,93	3,546
Late Majority	42	12,00	47	56	53,10	3,106
Laggards	6	1,714	30	46	40,83	6,014
Total	350	100	30	93	67,33	9,965

Table 4 illustrates 28 (8.00%) of elementary teachers are in *the innovator* category, 135 (38.571%) are in *the early adopter* category, 139 (39.714%) are in *the early majority* category, and 42 (12.00%) are in *the late majority* category, and 6 (1,714%) are in *the laggards* category. When evaluated in general, it can be said that the majority of elementary teachers are in the early majority category.

Table 5. *Elementary teachers' scores regarding the sub-dimensions of lifelong learning competences*

Sub dimensions of Lifelong Learning Competences	N	Min.	Max.	$\bar{X}$	SD
The Communicative Competence in the Native Language	350	4	20	17,95	2,715
The Communicative Competence in a Foreign Language	350	4	20	8,47	4,365
The Mathematical and Basic Competences in Science and Technology	350	3	15	12,21	1,912
Digital Competence	350	2	10	8,00	1,524
The Competence of Learning to Learn	350	2	10	8,26	1,297
The Competence of Social Citizenship Awareness	350	3	15	12,61	1,937
The Competence of the Sense of Initiative and Entrepreneurship	350	4	20	16,36	2,561
The Competence of Cultural Awareness and Expression.	350	1	5	3,82	,876
Total	350	23	115	87,67	10,284

Table 5 shows elementary teachers' lifelong learning competences, the average communicative competence in the native language is *very sufficient* with $\bar{X}$=17.95, the average competence in a foreign language is *not sufficient* with $\bar{X}$= 8.47, the average mathematical and basic competences in science and technology is *sufficient* with $\bar{X}$=12.21, the digital competence average is *very sufficient* with $\bar{X}$=8.00, the competence of learning to learn is *very sufficient* with an average of $\bar{X}$=8.26, the average of social citizenship awareness is *sufficient* with $\bar{X}$=12.61, the average of competence of the sense of initiative and entrepreneurship is *sufficient* with $\bar{X}$=16.36, and the average of competence of cultural awareness and expression is at a *sufficient* level with $\bar{X}$=3.82.

Findings on elementary teachers' individual innovativeness levels and their lifelong learning competences, gender, seniority, and marital status

The second question of the study focused on whether elementary teachers' individual innovativeness levels and lifelong learning competences differ in terms of gender, seniority, and marital status. The evidence obtained as a result of the analysis is presented in Tables 6, 7, 8, 9, and 10.

Table 6. *T-test results of elementary teachers' individual innovativeness levels and lifelong learning competences in terms of gender*

	Gender	N	$\bar{X}$	SD	df	t	p
Innovativeness	Female	167	66,62	10,710	348	-1,288	,199
	Male	183	67,99	9,214			
Lifelong Learning Competences	Female	167	88,04	10,242	345,648	,653	,514
	Male	183	87,32	10,338			

When Table 6 is examined, there is no significant difference (p>.05) between male and female teachers. The average score of female elementary teachers on the individual innovativeness scale is $\bar{X}$=66.62, the average score of male elementary teachers is $\bar{X}$=67.99, and both gender groups are *moderate innovators* in terms of individual innovativeness levels. On the other hand, the average score of female elementary teachers in the lifelong learning competence category was $\bar{X}$=88.04 while male elementary teachers' average score was $\bar{X}$=87.32. And, it was determined that both gender groups saw themselves at a *sufficient* level in the lifelong learning competences category.

Table 7. *Descriptive statistical results for elementary teachers' individual innovativeness levels and lifelong learning competences according to their seniority level*

	Seniority	N	$\bar{X}$	SD
Individual Innovativeness	Up to 5 years	32	65,63	10,533
	6-10 years	48	67,88	9,421
	11-15 years	66	66,61	11,522
	16-20 years	79	65,89	9,445
	21 years and over	125	68,86	9,357
	Total	350	67,33	9,965
Lifelong Learning Competences	Up to 5 years	32	90,13	8,750
	6-10 years	48	87,85	8,087
	11-15 years	66	88,62	10,376
	16-20 years	79	87,05	11,569
	21 years and over	125	86,85	10,495
	Total	350	87,67	10,284

According to Table 7, the average score of 350 elementary teachers in the seniority category up to 5 years is $\bar{X}$=65.63. Teachers with a seniority of 6-10 years were found to have an average score of $\bar{X}$=67.88. While those with 11-15 years of seniority had an average score of $\bar{X}$=66.61, the average score of the 16-20 years seniority group was $\bar{X}$=65.89. The elementary teachers, who constitute the majority of the group, have the highest average score with $\bar{X}$=68.86 in the seniority group of 21 years and above. Again, according to the lifelong learning competence scale of elementary teachers, the average of teachers with seniority of up to 5 years is $\bar{X}$=90.13, which is at the same time the highest average. The average of those in the 6-10 years group is $\bar{X}$=87.85, and the average of those in the 11-15 years seniority group is $\bar{X}$=88.62. While the average of teachers with 16-20 years of seniority was $\bar{X}$=87.05, the average score of elementary teachers in the group of 21 years and above was $\bar{X}$=86.85.

Table 8. *ANOVA results of elementary teachers' individual innovativeness levels and lifelong learning competences regarding the seniority variable*

	Source of Variance	KT	SD	KO	F	p
Innovativeness	Between Groups	600,718	4	150,180	1,521	,195
	In groups	34055,170	345	98,711		
	Total	34655,889	349			
Lifelong Learning Competences	Between Groups	368,970	4	92,242	,871	,482
	In groups	36542,919	345	105,922		
	Total	36911,889	349			

p>0.05

As shown on the Table 8, there is no difference among the groups (F=1.521;p>0.05).

Table 9*. The t-test results of the marital status variable of the individual innovativeness levels and lifelong learning competences of elementary teachers*

	Marital status	N	Average	SD	df	t	p
Innovativeness	Married	317	67,61	9,455	348	1,620	,106
	Single	33	64,67	13,860			
Lifelong Learning Competencies	Married	317	87,43	10,349	40,372	-1,454	,154
	Single	33	89,97	9,479			

According to Table 9, there is no statistical difference between the groups (t=1,620;-1,454; p>.05) based on the t-test.The individual innovativeness average score of 317 married elementary teachers is $\bar{X}$=67.61 and the average score for the lifelong learning competence is $\bar{X}$=87.43. The individual innovativeness score averages of 33 single elementary teachers are $\bar{X}$=64.67, and the lifelong learning competence scores are $\bar{X}$=89.97. It has been found that both married and single elementary teachers are *"moderate innovators"* and *"sufficient"*at the level of lifelong learning competence.

Findings related to individual innovativeness levels and lifelong learning competences of branch teachers.

In the third sub-problem of the research, to seek an answer to the question *what are the individual innovativeness levels and lifelong learning competences of branch teachers?* First of all, general descriptive statistical values for branch teachers' individual innovativeness levels and lifelong learning competences have been presented. Then, analysis has been made according to sub-dimensions of scales.

Table 10. *Descriptive statistical values of branch teachers' individual innovativeness levels and lifelong learning competences*

Variable	N	$\bar{X}$	Min.	Max.	SD
Individual Innovativeness	368	67,85	40,00	92,00	10,175
Lifelong Learning Competences	368	89,13	31,00	113,00	11,743

The highest score obtained by branch teachers from the individual innovativeness scale is 92.00 and the lowest score is 40.00 in table 10. The point averages of the branch teachers in the individual innovativeness category are $\bar{X}$=67.85 and they are *moderate innovators* with this average, and they are in the early majority category. They got the highest score of 113,00 and the lowest score of $\bar{X}$=31.00 on

the lifelong learning competences scale of branch teachers. It can be indicated that the general average of lifelong learning competence of branch teachers is $\bar{X}$=89.13 and they are at a *sufficient* level.

Table 11. *Descriptive statistical values of branch teachers based on innovativeness*

Innovativeness Categories	N	(%)	Min.	Max.	$\bar{X}$	SD
Innovators	48	13,043	81,	92	85,29	3,591
Early Adopters	118	32,065	69	80	73,09	3,292
Early Majority	161	43,75	57	68	63,22	3,286
Late Majority	35	9,510	47	56	51,86	3,050
Laggards	6	1,630	40	45	42,67	1,966
Total	368	100	40	92	67,85	10,175

When the innovativeness categories are examined in Table 11, it is found that 48 (13,043%) of 368 branch teachers are innovators, 118 (32,065%) are early adopters, 161 (43.75%) are the early majority, 35 (9,510%) are the late majority, and 6 (1,630) are in the *laggards* category. Findings display the majority of the branch teachers are in the *early majority* category.

Table 12**.** *Descriptive statistical scores of branch teachers' lifelong learning competences*

Sub-Dimensions of Lifelong Learning Competences	N	Min.	Max.	$\bar{X}$	SD
The Communicative Competence in the Native Language	368	4	20	18,33	2,487
The Communicative Competence in a Foreign Language	368	4	20	10,02	5,352
The Mathematical and Basic Competences in Science and Technology	368	3	15	11,73	2,495
Digital Competence	368	2	10	8,04	1,692
The Competence of Learning to Learn	368	2	10	8,33	1,379
The Competence of Social Citizenship Awareness	368	3	15	12,42	2,181
The Competence of the Sense of Initiative and Entrepreneurship	368	4	20	16,40	2,799
The Competence of Cultural Awareness and Expression.	368	1	5	3,86	1,059
Total	368	23	115	89,13	11,743

It is seen in table 12 that the average communicative competence in the native language of branch teachers is *very sufficient* with $\bar{X}$=18.33, the average communicative competence in a foreign language is *moderately sufficient* with $\bar{X}$=10.02, the average of the mathematical and basic competences in science and technology is *sufficient* with $\bar{X}$=11.73, the average of digital competence is sufficient with $\bar{X}$=8,04, the average of the competence of learning to learn average is *very sufficient* with $\bar{X}$=8.33, the average of the competence of social citizenship awareness is *sufficient* with $\bar{X}$=12.42, the average of the competence of the sense of initiative and entrepreneurship is *sufficient* with $\bar{X}$=16.40, and cultural awareness and expression competence average *sufficient* with $\bar{X}$=3.86 scores.

Findings related to gender, seniority, and marital status variable of branch teachers' individual innovativeness levels and lifelong learning competences.

The fourth question of the study aims to reveal whether branch teachers' individual innovativeness levels and lifelong learning competences differ significantly in terms of gender, seniority and marital status. The findings are presented in Tables 14, 15, 16, 17, and 18.

Table 13. *T-test results of branch teachers' individual innovativeness levels and lifelong learning competences based on the gender variable*

	Gender	N	$\bar{X}$	SD	df	t	p
Innovativeness	Female	194	68,03	9,904	356,112	,363	,717
	Male	174	67,64	10,494			
Lifelong Learning Competencies	Female	194	90,72	11,163	352,880	2,753*	,006
	Male	174	87,36	12,146			

As shown on table 13, there is no significant difference regarding gender in the individual innovativeness scale (t=2.753, p<.05) in terms of lifelong learning competences, and this difference has been found to be in favor of female teachers. While the average score of 194 female teachers on the individual innovativeness scale by gender is $\bar{X}$=68.03, it was seen that the average score of 174 male teachers is $\bar{X}$=67.64, and it has been determined that both gender groups were *moderate innovators.* As for their lifelong learning competences, it has been found that the average score of female branch teachers on the scale is $\bar{X}$=90.72, while the average score of male teachers is $\bar{X}$=87.36 and they have *sufficient* lifelong learning competence.

Table 14. *Descriptive statistics results of teachers with different seniority years in terms of individual innovativeness levels and lifelong learning competences of branch teachers*

	Seniority	N	$\bar{X}$	SD
Individual Innovativeness	Up to 5 years	64	68,27	9,087
	6-10 years	71	68,07	10,537
	11-15 years	56	67,93	10,898
	16-20 years	100	67,76	10,641
	21 years and over	77	67,35	9,763
	Total	368	67,85	10,175
Lifelong Learning Competences	Up to 5 years	64	88,31	11,410
	6-10 years	71	92,17	11,010
	11-15 years	56	92,23	10,908
	16-20 years	100	88,70	13,019
	21 years and over	77	85,30	10,394
	Total	368	89,13	11,743

When Table 14 is examined, the average of teachers up to 5 years is $\bar{X}$=68.27, the average of those in the 6-10 years seniority group is $\bar{X}$=68.07, and the average score of the branch teachers in the 11-15 years seniority group is $\bar{X}$=67.93. While the average score of teachers in the 16-20 years seniority group is $\bar{X}$=67.76, the average of the teachers in the seniority group of 21 years and above is $\bar{X}$=67.35. Again, branch teachers of lifelong learning competence, the average score of those up to 5 years is $\bar{X}$=88.31, the average score of those with 6-10 years is $\bar{X}$=92.17, the average score of those in the 11-15 years seniority group is $\bar{X}$=92.23, While the average score of seniority levels of teachers with 2 years is $\bar{X}$=88.70, the average score of those with 21 years and above is $\bar{X}$=85.30.

Table 15. *ANOVA results of the seniority variable of branch teachers' individual innovativeness levels and lifelong learning competences*

	Source of Variance	KT	SD	KO	F	p	Significant Difference
Innovativeness	Between groups	34,859	4	8,715	,083	,988	
	Ingroups	37960,619	363	104,575			
	Total	37995,478	367				
Lifelong Learning Competences	Between groups	2386,163	4	596,541	4,490*	,001	6-10>21 and over
	Ingroups	48222,834	363	132,845			11-15>21 and over
	Total	50608,997	367				

p<.05

As shown on table 15, there is no significant difference among the groups on the individual innovativeness scale. Another finding has shown there is a significant difference between the groups (F=4.490, p<.05) based on the lifelong learning competences scale and TUKEY multiple comparison test has been conducted to ascertain between which seniority groups the significant difference is. Based on the average scores obtained from the TUKEY test the lifelong learning competences scale, the teachers with 6-10 years ($\bar{X}$=92.17) and 11-15 years ($\bar{X}$=92.33) seniority levels have a higher average score than the teachers with a seniority of 21 years or more ($\bar{X}$= 85,30) and the difference is in favor of the teachers in the 6-10 and 11-15-years group.

Table 16. *The t-test results of the marital status variable of the individual innovativeness levels and lifelong learning competences of the branch teachers*

	Marital Status	N	$\bar{X}$	SD	df	t	p
Innovativeness	Married	305	67,53	10,229	91,816	-1,349	,181
	Single	63	69,38	9,843			
Lifelong Learning Competencies	Married	305	88,83	11,959	97,487	-1,160	,249
	Single	63	90,57	10,604			

According to table 16, there is no significant difference between the groups (t=-1,349;-1,160; p>.05). The average score of individual innovativeness of married branch teachers is $\bar{X}$= 67.53, while the average score of single branch teachers is $\bar{X}$=69.38. While married branch teachers are *moderate innovators* and in the early majority group according to innovativeness adoption categories, single branch teachers are in the category of *highly innovators* and *early adopters*. On the other hand, it has been found that the average lifelong learning competence score of married branch teachers is $\bar{X}$=88.83, and single branch teachers are $\bar{X}$=90.57. Both groups have a *sufficient* level of lifelong learning.

Findings on the elementary and branch teachers' individual innovativeness levels and lifelong learning competences

This question of the research has been created to find out whether the two groups of teachers differ in terms of individual innovativeness levels and lifelong learning competences. The findings obtained as a result of the analyzes are presented in Table 17.

Table 17. *The t-test results on whether the individual innovativeness levels and lifelong learning competences of elementary teachers and branch teachers differ*

	Branch	N	$\bar{X}$	SD	df	t	p
Innovativeness	Class	350	67,33	9,965	715,383	-,683	,495
	Branch	368	67,85	10,175			
Lifelong Learning Competences	Class	350	87,67	10,284	711,212	-1,777	,076
	Branch	368	89,13	11,743			

As can be seen in Table 17, There is no significant difference between both branch and elementary teachers in terms of individual innovativeness and lifelong learning competence (t=-,683;-1,777; p>.05). The mean scores of the elementary teachers on the individual innovativeness scale are $\bar{X}$=67.33, and that of the branch teachers is $\bar{X}$=67.85. According to the scale of lifelong learning competences, the average score of class teachers is $\bar{X}$=87.67, and the average score of branch teachers is $\bar{X}$=89.13. In terms of individual innovativeness levels, teachers have been found to be *moderate innovators*. Although the average score of the branch teachers is higher than that of the elementary teachers, it has been found that both groups have *sufficient* lifelong learning competence.

Discussion and Conclusion

The results of this study reveal that both elementary and branch teachers are *moderate innovators* and are in the *early majority* category in terms of adopting innovativeness. As a result of the literature study, many researchers reported that pre-service teachers and teachers in Turkey are *moderate innovators*, and in line with the findings of this study, most of them are in the *early majority* category in adopting innovativeness (Adıgüzel, 2012; Atalay Altaş, 2021;Demir Başaran & Keleş, 2015; Demir &Demir, 2023; Deniz, 2016; Kert & Tekdal, 2012; Keskinkılıç Kara & Yoz, 2021; Kılıçer, 2011; Korucu & Olpak, 2015; Özgür, 2013; Şahin İzmirli & Gürbüz, 2017; Şahin & Thampson, 2006). However, among the related studies in the literature in Turkey, there are studies with low and high individual innovativeness levels. For instance, while Yılmaz (2013), Kılıç (2015) Yenice Alpak and Tunç (2019) reached innovativeness of the participants were *low* in their master's thesis studies, some researchers determined *high* individual innovativeness levels (Akgün, 2017; Atılgan & Tükel, 2021; Keskin, 2021; Kılıçer, 2011; Yılmaz Öztürk & Summak, 2014). The early majority group who are in the middle of the innovativeness adoption categories are those who are more cautious in terms of adopting an innovation, have a longer time to adopt it. In addition, the individuals in this group do not take risks and they are at the middle level in terms of education and socio-economic status.Furthermore, individuals in this category are regarded as having a common sense and good command of communication in society (Kılıçer, 2011; Özgür, 2013; Rogers, 1995). On the other hand, Kılıç and Ayvaz Tuncel (2015) emphasized that people in the early majority category show resistance to innovation, and therefore its adoption process is prolonged. Besides, Rogers (1983) points out that individuals in the early majority are active in society but they rarely become leader. Thus, their acceptance status is longer than the other categories, and they may be both the first and last to try something innovative. Based on Rogers (1983), we can contend that the teachers in the study play a significant role in adopting innovativeness and disseminating it to society though they abstain from being the first to attempt. In this regard, various factors may cause this attitude of teachers who evaluate the innovativeness and developments in the Turkish education system with a questioning perspective. However, in the Turkish Education system in 2005-2006, the curricula were prepared on the basis of the constructivist education philosophy, and it was determined that the teachers were similarly cautious in internalizing this new approach and putting

it into practice (Bayrakdar Çiftçi, Akgün, Deniz, 2013; Karagöz & Doğan, 2016). In particular, making another change without waiting for the results of the changes made in the system may be the cause of the teachers' attitude in embracing innovation.

However, the second category in which both groups of teachers showed the highest concentration is the early adopters. This finding reveals that although the majority of teachers are not in the innovator category, they are intertwined with those in the *early adopter* category, who are role models in adopting innovativeness. This can help reduce the time needed to adopt the innovations. Because, early adopters are role models and opinion leaders in adopting innovations compared to the early majority (Beal & Bohlen, 1956; Özgür, 2013; Rogers, 1995). Kayasandık (2017) and Çoklar and Özbek (2017) reported in their research that the majority of teachers see themselves in both early adopters and early majority categories. Yılmaz and Bayraktar (2014), Akgün (2017), Atılgan and Tükel (2021), Keskin (2021), concluded that teachers and instructors are in the early adopter category.

Another result of this research is that both elementary and branch teachers perceive themselves as *"sufficient"* in terms of lifelong learning competences. Studies in the literature on lifelong learning competences (Adabaş, 2016; Akçay, 2021; Altıntaş, 2022; Aykaç, Köğce & Aslandağ, 2021; Evin Gencel, 2013; Gök, 2022; Gökbulut, 2021; İncik Yalçın, 2020; Kazu & Erten, 2016; Pilli, Sönmezler, & Göktan, 2017; Şahin & Arcagök, 2014; Yavuz Konakman & Yanpar Yelken, 2014; Yenice Alpak & Tunç, 2019; Yıldırım, 2021) reported teachers' *competence* level as *high*. While elementary teachers saw themselves as *insufficient* only in the sub-dimension of foreign language communicative competence, branch teachers saw themselves as *moderately sufficient* in the same sub-dimension. However, in the literature, there are also similar studies in which the participants found themselves insufficient in the communicative proficiency sub-dimension in a foreign language and sufficient in the communicative proficiency in the native language sub-dimension. (Adabaş, 2016; Babanlı & Akçay, 2018; Evin Gencel, 2013; Karakuş, 2013; Pınarcık et al.; 2016; Şahin et al., 2010;). It can be interpreted that the teachers' perception of themselves as insufficient in foreign language communicative competence may be due to the fact that they cannot receive the necessary education, or they may have some prejudices about the education. They are expected to receive in this direction, or they cannot find the necessary financial support. It can be said that these key competencies, which are seen as basic life skills (Bilasa & Taşpınar, 2017) for the human resources, are of great importance in terms of the transformation of the education system and the goals of our lifelong learning education policies. At this point, there are various developments in Turkey regarding foreign language education. Because each of the lifelong learning competences is crucial in terms of the contemporary educational goals that are desired to be attained. In this context, educators, as well as learners, should benefit from certain educational reforms. Information age societies need individuals who have acquired lifelong learning skills, who can constantly renew themselves, update what they know, and seek innovation (Atkin, 2000; Şahin et al.). In this context, it can be considered a very important and positive result that both elementary and branch teachers consider themselves competent in lifelong learning competences based on the result of the research.

In the study, it was examined whether the individual innovativeness levels of both elementary and branch teachers differed according to the gender variable, and the results of both teacher groups were discussed together. The findings show that the individual innovativeness levels of female and male teachers did not differ significantly for both elemantaryand branch teachers. This finding is similar to

the research findings in the literature in Turkey, the USA, and the Netherlands (Çuhadar, Bülbül, & Ilgaz, 2013; Demir Başaran & Keleş, 2015;Demir & Demir, 2023; Könings, Gruwel, & Merrienboer, 2007; Özgür, 2013; Rogers & Wallace, 2011; Yıldırım, 2021). The fact that the number of participants is close to each other according to gender, and female and male teachers are in the same social and economic structure having equal conditions can be counted among the reasons for this situation.

While the gender of the teachers did not significantly change their lifelong learning levels in the elementary teachers, it was determined that it caused a difference in the branch teachers. Lifelong learning competences of female branch teachers were found to be significantly different from males. As in the aforementioned study, studies have been found indicating that gender is not very effective on the lifelong learning levels of elementary teachers. Aykaç, Köğce & Aslandağ, 2021, Kirby, Knapper, Lamon & Egnatoff, 2010; Kozikoglu, 2014; Neighbor, 2015; Şahin & Arcagök, 2014; Yıldırım's work in 2021 can be cited among them. On the other hand, gender affected the lifelong learning competence of branch teachers, and the result was in favor of female branch teachers. According to the results obtained, there are similar studies in the literature with results in favor of female teachers or teacher candidates (Akçay, 2021; Altıntaş, 2022**;** Arcuria, 2011; Diker Coşkun, 2009; Evin Gencel, 2013; Goodrich, 2015; İncik Yalçın, 2020; Özçifçi & Çakır, 2015Yavuz Konakman & Yanpar Yelken, 2014). According to Jenkins (2004), because women take on many responsibilities throughout their lives (being a wife and mother, etc.) and these responsibilities expose them to situations such as changing jobs, interrupting work, or quitting, women inevitably strive to adapt to change and this affects their lifelong learning skills more positively than men. This situation pointed out by Jenkins (2004) can be explained by the fact that women are more prone to learning although there is a contrary result to the research finding in the literature that male teachers have a high perception of lifelong learning efficacy (Erdener & Gül, 2017). The European Union, which states that the duration of education has been getting longer in the last thirty years, emphasizes that women's participation in education has increased compared to men among the young population, and their success is higher than men's (EU Council, 2005). In addition, the European Union has indicated that lifelong learning is gaining significance in societies, the rate of continuing education after compulsory education is gradually accumulating and the participation in lifelong learning is higher among women than men (EU Council, 2005).

There is no difference among elementary and branch teachers in terms of their innovativeness based on their seniority. These findings are also supported by most of the studies in the literature (Atalay Altaş, 2021; Çetin & Bülbül, 2017; Demir Başaran & Keleş, 2015, Kılıç, 2015, Yıldırım, 2021). However, Kayasandık (2017), Yılmaz, and Beşkaya (2018), Yüksel (2020) reported that individual innovativeness scores increased due to the experience of teachers with more than one senior year. Although seniority, which can be defined as the time spent in the profession, did not cause a significant difference among elementary teachers, it led to a significant difference in branch teachers in terms of life long learning competencies. The significant difference between the seniority groups is between the teachers with 6-10 years of seniority and the teachers with 21 years and above, and the difference is in favor of the teachers in the 6-10 years and 11-15 years seniority groups. There are studies that overlap with the research findings (Kazu & Erten, 2016; Pınarcık et al.,2016; Şahin & Arcagök, 2014; Yaman & Yazar, 2015; Yüksel, 2020). On the other hand, there are similar studies supporting the research finding that the seniority variable does not have an effect on the lifelong learning competence of elementary teachers (Ayaz, 2016; Özçifçi & Çakır; Torun & Güvercin Seçkin, 2021; Yılmaz & Beşkaya, 2018,). The fact that the lifelong learning competences of the teachers whose seniority group is young may be due

to their being in the generation that can adapt more to the innovativeness and opportunities of the current age.

It was determined that there was no significant difference between the scales used in the study and the marital status of the participants. Married and single elementary teachers and married branch teachers are in the category of moderate innovators and early adopters. Single branch teachers are in the highly innovative and early adopter category. In the literature, it was concluded that the results of the studies related to innovativeness and conducted in different institutions where the marital status variable was used (Işık & Meriç 2015; Kayasandık, 2017; Pekdoğan, 2017) were similar to the results of the research. The reason for this is that individuals, regardless of whether they are married or single, may perceive being innovative as a need and may have adopted innovativeness at the same rate. On the other hand, when the lifelong learning competences of elementary and branch teachers were examined in terms of marital status variable, It was determined that both groups are sufficient in terms of lifelong learning. Çam and Üstün (2016), Özkorkmaz (2016) and Yüksel (2020) concluded in their studies on lifelong learning that marital status does not affect lifelong learning. The results of these studies were similar. As a matter of fact, it can be interpreted that this may be due to the fact that both single teachers and married teachers believe in the continuity of learning and strive for it.

As a result, no significant difference was found between the two scales and the teachers' levels. Both groups are in the *moderate innovator* and *early majority* categories. Findings of the study are in line with the available literature (Atılgan & Tükel, 2021; Demir & Demir, 2023; Keskinkılıç Kara & Yoz, 2021; Kılıç, 2015; Yılmaz & Beşkaya, 2018). In addition, according to the research conducted by Znidarsic and Jereb (2011) in Slovenia, a positive relationship was found between the investments made in lifelong learning and innovation in the development of societies and the innovativeness level of individuals. Moreover, it was found that teachers scored above the average on the lifelong learning competence scale and had sufficient lifelong learning competences. The fact that teachers are innovative, willing to adopt innovativeness, and open to change has been a promising result for the future. Their innovative characteristics in this direction can positively affect teachers' willingness to learn, their lifelong learning attitudes, their level of being open to change, and having key competences.

Recommedations

In this context, the following recommendations can be suggested for future researches:

Programs and projects can be developed to improve teachers' lifelong learning competencies and innovativeness levels.

Teachers can be offered in-service training to improve their lifelong learning competencies and innovativeness levels.

Training on lifelong learning and innovation can be given to preservice teachers in education faculties.Quantitative or qualitative studies can be conducted by examining and comparing the lifelong learning and innovativeness levels of teachers in Turkey and other countries.

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BIOGRAPHICAL NOTES

Contribution Rate of Researchers

Author 1: 50%

Author 2: 50%

Conflict Statement

There is no material or individual organic connection with the people or institutions involved in the research and there is no conflict of interest in the research.

Genişletilmiş Türkçe Özet

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Sınıf ve Branş Öğretmenlerinin Yaşam Boyu Öğrenme Yeterlikleri ve Bireysel Yenilikçilik Düzeylerinin Çeşitli Değişkenlere Göre Karşılaştırmalı Olarak İncelenmesi

Giriş

Bilginin hızlı bir şekilde üretilip ve aynı hızla sürekli güncelliğini yitirip yerini yeni bilgilere bıraktığı bilgi çağı olarak adlandırlan içinde yaşadığımız yüzyıl birçok anlamda diğer dönemlerden oldukça farklıdır. Çağın getirdiği farklılıklar ve değişimler bireyler için de değişimi zorunlu kılmakta ve özellikle bilginin en önemli güç olarak kabul edildiği bu dönemde bilgiye nasıl ve ne şekilde ulaşılıp bilginin yenileneceği önem kazanmaktadır. Nitekim yaşanılan yüzyılda insanoğlunun tüm değişimlerle ve yeniliklerle baş edip uyum içerisinde yaşayabilmesi için birtakım niteliklere sahip olması gerekmektedir. Sahip olması gereken nitelikleri fark eden insanoğlu için öğrenmenin sürekliliğine ve yeniliğe karşı olan tutumu da değişmiştir. Öyleki ortaya çıkan probleme, ihtiyaca çözüm olabilecek bir takım yeni anlayışlar ortaya çıkmıştır. Bu anlayışlardan bir tanesi de tarihi oldukça eskiye Plato'ya Aristo'ya kadar dayandığı iddia edilen öğrenmenin beşikten mezara kadar sürdüğünü belirten yaşam boyu öğrenme anlayışıdır. Küreselleşme ile birlikte mekâna ve zamana bağlı kalmaksızın eğitimin devamlı olabileceği anlaşılmış ve bireylere kendilerini sürekli güncelleme fırsatı sunan yaşam boyu öğrenme yaklaşımı ortaya çıkmıştır. Bu kapsamda değişen çağ ile uyum içerisinde olabilmenin ön koşulları arasında yeniliklere açık ve yaşam boyu öğrenme becerilerine sahip olmak sayılabilir. Nitekim bilginin artan bir hızla güncelliğini yitirdiği yirmi birinci yüzyılda, bireyleri eğitip topluma yön vermekle görevli okullara ve öğretmenlere önemli sorumluluklar düşmekte sürekli eğitime yön veren yeni yaklaşımlar ortaya çıkmaktadır. İçinde bulunulan her çağın sahip olduğu bireylerde bazı özelliklerin olması gerektiği ifade edilmekte ve bireylerinde bu doğrultuda eğitilmesi için eğitim sistemlerinde değişiklikler yapılmaktadır. 21. yüzyıl insanında da teknolojik yeterlik, öğrenmeyi sürdürme, yeniliklere açık olma, yaratıcı, eleştirel düşünme gibi bir takım özelliklerin olması beklenmektedir. Bu noktada

bireylerin, toplumun ihtiyaç duyduğu nitelikte yetişerek ülkelerini modern dünyanın gerisinde bırakmayacak özelliklere sahip olmalarında eğitim kurumlarının düzenlenmesine ve öğretmen niteliklerinin artırılmasına ihtiyaç vardır. Özellikle yaşam boyu öğrenme yaklaşımı bireylere kendi öğrenmelerinin sorumluğunu vermesi, öğrenmenin devamlılığını savunması açısından gelişimsel bir zorunluluk da yüklemektedir. Nitekim yenilikçi anlayışlar da bu bağlamda yaşam boyu öğrenme ile iç içedir. Çünkü toplumda, dünyada meydana gelen değişimlere uyum sağlamak bireylerin yenilikçi olma özellikleri ile ilgili iken, değişim sonucu ortaya çıkan yeni olan her şeyi gerçek hayat içerisinde uygulayabilmek ise bireyin öğrenmeye karşı olan algısı ve tutumu ile ilgilidir.

Son yıllarda Türkiye'de yaşam boyu öğrenme ile ilgili birçok eğitim politikası geliştirilmiş ve eğitim sistemleri içerisine söz konusu anlayışı dahil etme çabaları da sürmektedir. Özellikle cumhuriyetin ilanından sonra eğitim alanında yapılan birçok yeniliğin aslında yaşam boyu öğrenme anlayışı ile ilgili olduğu görülsede özellikle iki binli yıllardan sonra daha resmi ve bilinçli bir şekilde eğitim sistemimizde hayat boyu öğrenme ile ilgili eğitim politikalarının geliştirilmeye başlandığı görülmektedir. Hayat boyu öğrenme stratejileri geliştirilmiş ve yayınlanmış, kalkınma planlarına hayat boyu öğrenme felsefesi dahil edilmiş ve bu kapsamda birtakım gelişmeler yaşanmış ve yaşanmaya da devam etmektedir. İlkokuldan yükseköğretime kadar eğitim sistemimizin her kademesinde hayat boyu öğrenmeyi içeren gelişmeler son yıllarda hızla devam etmektedir.

Bu süreçte eğitimin topluma yansımasındaki en önemli paydaş olarak öğretmenler görülmekte ve öğretmenlere yönelik birtakım çalışmalar devam etmektedir. Öyleki bir toplumda değişim aracı olarak da görülen öğretmenin rolü yirmi birinci yüzyılda daha önce hiç olmadığı kadar belirgin hale gelmekte, öğretimin kalitesi ve öğretmenlerin önemi sürekli vurgulanmaktadır. Bu yüzyılda birçok alanda yeterliği yüksek öğretmenlere sahip olmak oldukça önemli hale gelmiştir. Türkiye'de bu kapsamda öğretmenler ve öğretmen adaylarına yönelik yaşam boyu öğrenme ile ilgili bilimsel çalışmalar yapılmış ve yapılmaya devam etmektedir. Özellikle nüfusunun çoğunluğu genç bir ülke olan Türkiye'de öğretmenler ile öğrenciler arasında çağın getirdiği değişimleri ve gelişmeleri takip etme açısından çok büyük farkların olmaması gerekmektedir. Bu noktada alan yazın incelendiğinde daha çok öğretmen ve öğretmen adaylarının sadece yaşam boyu öğrenme eğilimleri ya da yeterliklerinin incelendiği görülmektedir. Dolayısıyla yaşam boyu öğrenmeyle birbirini destekleyecek yaklaşımların birlikte incelenmediği tespit edilmiştir. Ayrıca alan yazın incelendiğinde öğretmenlerin ya da öğretmen adaylarının bireysel yenilikçilik düzeylerinin incelendiği araştırmaların azlığı da dikkat çekmektedir. Bu nedenle araştırma sonuçları öğretmenlerin yaşam boyu öğrenmeye yönelik yeterliklerinin geliştirilmesi, yenilikçi özelliklerinin ortaya çıkarılması açısından oldukça önemlidir. Ayrıca çağın gerektirdiği bir toplum haline gelebilmek için öğretmen eğitiminin önemini ortaya koyarak bu doğrultuda geliştirilecek eğitim politikalarına, yükseköğretime konu oluşturması açısından da araştırma sonuçları önem arz etmektedir. Bu doğrultuda araştırmada nitelikli bir toplumun ortaya çıkmasında belirleyici roldeki öğretmenlerin mesleki gelişimlerini artıracak yaşam boyu öğrenme yeterliklerini ve yenilikçilik düzeylerini ortaya çıkarmak amaçlanmıştır. Sınıf ve branş öğretmenlerinin yaşam boyu öğrenme yeterlikleri ile bireysel yenilikçilik düzeyleri araştırmada incelenerek iki yeterlik açısından gruplar arasında anlamlı fark olup olmadığı araştırılmıştır. Ayrıca araştırmada öğretmenlerin yaşam boyu öğrenme yeterlikleri ve bireysel yenilikçilik düzeyleri cinsiyet, medeni durum ve kıdem değişkenleri açısından da incelenmiştir.

Yöntem

Araştırma Kayseri ilinde görev yapan sınıf ve branş öğretmenlerinin yaşam boyu öğrenme yeterlikleri ile bireysel yenilikçilik düzeylerini incelemeyi amaçlayan tarama modelindedir. Araştırmanın çalışma grubunu Kayseri ili merkez ilçelerinde tabakalı örnekleme yöntemi ile ulaşılan 368 branş, 350 sınıf öğretmeni olmak üzere toplam 718 öğretmen oluşturmaktadır. Araştırmanın verileri kişisel bilgi formu ile birlikte sekiz alt boyuttan 23 maddeden oluşan beşli likert tipinde *Yaşam Boyu Öğrenmede Anahtar Yeterlikler Ölçeği* (Şahin, Akbaşlı ve Yanpar Yelken, 2010) ve Türkçe'ye uyarlaması yapılan yine beşli likert tipinde 20 maddeden oluşan *Bireysel Yenilikçilik Ölçeği* (Kılıçer ve Odabaşaı, 2010)' nden oluşan veri toplama aracı ile bizzat araştırmacı tarafından okullar ziyaret edilerek toplanmıştır. Tabakalara ayrılan beş merkez ilçeden araştırmanın verileri toplanmıştır. Araştırmada toplanan verilerin analizi için SPSS programı kullanılmıştır. Araştırmanın verileri analiz edilirleken parametrik veriler için Bağımsız Gruplar İçin t testi ve Tek Yönlü Varyans analizi (ANOVA), nonparametrik veriler için de bağımsız gruplar için Mann Whitney U Testi, Kruskal Wallis Testi ve TUKEY testi kullanılmış, ayrıca betimsel istatistiklerden yararlanılmıştır. Bununla birlikte araştırmada kullanılan ölçeklerin alt boyutlarında değişkenler açısından farklılık olup olmadığını belirlemek için cinsiyet ve medeni durum değişkenlerine ilişkin olarak bağımsız gruplar için t testi ve Mann Whitney U testi, kıdem değişkeni için Kruskal Wallis Testi, tek yönlü varyans analizi (ANOVA) testi TUKEY testi kullanılmıştır.

Bulgular

Araştırmada istatistiksel analizler sonucunda ortaya çıkan bulgular incelendiğinde hem sınıf hem de branş öğretmenlerinin yaşam boyu öğrenme ile ilgili yeterlilik algılarının ölçek ortalamasının üstünde ve yeterli düzeyde olduğu tespit edilmiştir. Ayrıca her iki öğretmen grubunun da yenilikçilik açısından orta düzeyde yenilikçi ve yenilikçiliği benimseme kategorileri içerisinde de sorgulayıcı kategoride yer aldıkları belirlenmiştir. Branş öğretmenlerinin yaşam boyu öğrenme yeterlik algıları cinsiyet değişkeni açısından incelenmiş kadın ve erkek öğretmenler arasında anlamlı farklılık tespit edilmiştir. Analizler sonucunda kadın branş öğretmenlerinin yaşam boyu öğrenme yeterlik algılarının erkek branş öğretmenlerinden daha yüksek olduğu sonucuna ulaşılmıştır. Ayrıca öğretmenlerin yaşam boyu öğrenme yeterliğine yönelik algılarının medeni durum değişkenine göre değişmediği; kıdem yılı açısından ise gruplar arasında farklılık olduğu tespit edilmiştir. Sonuç olarak 6-10 yıl ($\bar{X}$=**92.17**) ve 11-15 yıl ($\bar{X}$=**92, 33**) kıdeme sahip öğretmenlerin 21 yıl ve üzeri kıdeme sahip öğretmenlerden ($\bar{X}$=**85,30**) daha yüksek puan ortalamasına yani yeterliğe sahip olduğu ve farklılığın 6-10 yıl ve 11-15 yıl grubundaki öğretmenlerin avantajına olduğu bulgusuna ulaşılmıştır. Öte yandan sınıf öğretmenlerinin ve branş öğretmenlerinin bireysel yenilikçilik düzeylerinin cinsiyet, medeni durum ve kıdem yılı açısından gruplar arasında herhangi bir değişimin olmadığı sonucuna ulaşılmıştır. Ancak bekar branş öğretmenlerinin bireysel yenilikçilik düzeyleri evli olanlardan daha yüksek olarak belirlenmiştir. Ayrıca araştırmanın son alt problemi dâhilinde her iki öğretmen grubunun bireysel yenilikçilik düzeyleri ve yaşam boyu öğrenme yeterlikleri incelenmiş ve aralarında anlamlı fark olmadığı sonucuna ulaşılmıştır.

Tartışma ve Sonuç

Araştırmada toplanan verilerin alt problemlere ilişkin olarak istatistiksel analizi sonucunda elde edilen bulgular tartışılmış ve ilgili alan yazın ışığında yorumlanmıştır. Öğretmenlerin yaşam boyu öğrenme yeterliklerinin ve bireysel yenilikçilik düzeylerinin karşılaştırmalı olarak incelendiği

araştırmanın sonuçları hem sınıf hem de branş öğretmenlerinin *orta düzeyde yenilikçi* ve yenilikçiliği benimseme açısından *sorgulayıc*ı kategoride yer aldıklarını ortaya koymaktadır. Alan yazında Türkiye'de öğretmen adayları ve öğretmenlerle ilgili yürütülen çok sayıda araştırma sonuçlarının söz konusu araştırma sonuçları ile benzerlik gösterdiği tespit edilmiştir. Öğretmenlerin genel olarak büyük bir çoğunluğunun "sorgulayıcı" kategoride ve orta düzeyde yenilikçi olması ile ilgili olarak yeniliğe karşı tedbirli oldukları yeniliği benimseme konusunda belirli bir zamana ihtiyaç duydukları ifade edilebilir. Bu bağlamda yapılan araştırmanın sonucu dahilinde bu durumun nedeni olarak son yıllarda eğitim sistemimizde yaşanılan değişimler öğretmenlerin yenilikleri benimsemelerine karşı direnç oluşturmalarına veya bir yeniliği daha uzun süre içerisinde benimseme ihtiyacı duymalarına neden olmuş olabilir. Eğitim sisteminde meydana gelen değişimlerin hızla hayata geçmesi öğretmenlerin uygulama konusunda yetersiz kalmalarına bu nedenle de yenilikleri sorgulamalarına, daha az risk almalarına sebep olmuş olabilir. Diğer taraftan öğretmenlerin yaşam boyu öğrenme yeterlik düzeylerinin yüksek olması gelecek açısından kendilerini geliştirmeye istekli, öğrenmenin devamlılığına inanmaları açısından umut verici bir sonuç olmuştur. Bu bağlamda bilginin sürekli değişip geliştiği, geçerliliğini çok çabuk yitirdiği, teknolojinin sürekli yenilendiği çağımızda; yaşam boyu öğrenme yeterliklerine sahip ve yaşam boyu öğrenmenin farkında olan öğretmenlerin olması eğitimin geleceği açısından büyük önem taşımaktadır. Bu sayede toplumun rol modeli olan öğretmenler, erken yaşlardan itibaren öğrencilerini yaşam boyu öğrenme becerileri ile yetiştirecek, yetiştirdikleri nesillerin çağa ayak uydurmasına, bilgi toplumunun oluşmasına, toplumsal kalkınmaya en büyük katkıyı sağlayacaklardır. Nitekim ülkemizde yaşam boyu öğrenme konusunda atılan önemli adımların, geliştirilen projelerin, öğretmenlerin bu bağlamda bilgilendirilmesinin araştırmadan elde edilen sonucu desteklediği ifade edilebilir.

Araştırma kapsamında ele alınan ölçeklerden yaşam boyu öğrenmede anahtar yeterlikler ölçeğine göre genel olarak hem sınıf hemde branş öğretmenleri kendilerini yabancı dilde iletişim yeterliği alt boyutunda yeterli görmediklerini belirtmişlerdir. Türkiye'de, eğitim sisteminde yabancı dil eğitimi ile ilgili birçok reform yapılmaktadır. Yabancı dil eğitimine ilkokul ikinci sınıfta başlanmakta ve tüm eğitim kademelerinde yabancı dil ders sayısının önceki yıllara göre arttığı görülmektedir. Ancak yapılan reformların daha çok eğitilen kesime olup eğitimden sorumlu olan kesimin bu anlamda çok fazla yeniliklere dâhil edilmediği dikkat çekmektedir. Ülkemizde eğitim sistemi içerisinde yaşam boyu öğrenmenin son yirmi yıldır ağırlık kazandığı görülmekte ve bu yönde önemli adımlar atılmaktadır. Öğretmenlerin yabancı dilde kendilerini yeterli görememeleri yabancı dil reformlarına eğitim sisteminde yeni yeni yer verilmesi yani geçmişte bu tür yeniliklerin ve imkanların olmamasından dolayı şu an görev yapan öğretmenlerin bu alanda yeterli düzeyde eğitim alamamış olmalarından kaynaklanmış olabilir. Ancak yaşam boyu öğrenme yeterliklerinin her biri ulaşılmak istenilen çağdaş eğitim hedefleri açısından önemlidir ve anahtar niteliğindedir. Bu bağlamda öğreniciler kadar öğreticilerin de belirli eğitim reformlarından faydalanması gerektiği yorumu yapılabilir.

Sınıf öğretmenlerinin hem bireysel yenilikçilik hem de yaşam boyu öğrenme yeterlikleri açısından araştırmada ele alınan değişkenlere göre gruplar arasında herhangi anlamlı farklılık olmadığı sonucuna ulaşılmıştır. İlgili alan yazın incelendiğinde araştırma sonuçlarını destekleyen çalışmalar mevcuttur. Branş öğretmenlerinin ise bireysel yenilikçilik ölçeği açısından cinsiyet değişkeninde gruplar arasında anlamı farklılık görülmezken yaşam boyu öğrenme yeterlikleri açısından kadın branş öğretmenlerinin ortalamaları erkeklerden yüksek bulunmuş ve cinsiyet grupları arasında anlamlı farklılık tespit edilmiştir. Alan yazında araştırma sonuçları ile benzerlik gösteren araştırmalar

mevcuttur. Bu durum kadınların yaşamları boyunca birçok sorumlulukla baş edebilmelerinden kaynaklı olabilir. Kıdem değişkeni açısından da brans öğretmenleri arasında yaşam boyu öğrenme yeterlikleri açısından anlamlı farklılık tespit edilmiştir. Bu farklılık ise 6-10 yıl ile 11-15 yıl kıdeme sahip öğretmenler arasındadır ve 21 yıl üzeri kıdem yılına sahip öğretmenlerin yaşam boyu öğrenme yeterlik düzeyleri yüksek bulunmuştur. Kıdem grubu genç olan öğretmenlerin yaşam boyu öğrenme yeterliklerinin yüksek çıkması, yaşanılan çağın yeniliklerine ve imkanlarına daha çok uyum gösterebilen kuşak içerisinde yer almalarından kaynaklamış olabilir. Ayrıca öğretmenlerin bireysel yenilikçilik düzeyleri ile yaşam boyu öğrenme yeterlikleri arasında anlamlı fark tespit edilmemiştir. Genel olarak değerlendirildiğine branş öğretmenlerinin bireysel yenilikçilik puanları sınıf öğretmenlerinden çok az yüksektir, fakat her iki grupta orta düzeyde yenilikçi ve sorgulayıcı kategoride yer almaktadır.

Sonuç olarak öğretmenlerin yenilikçi olmaya hevesli, yeniliği benimseme konsunda istekli ve değişime karşı açık olmaları gelecek açısından umut verici ve olumlu olmuştur. Bununla birlikte öğretmenlerin yenilikçilik özelliklerinin de benzer yönde olmasının onların öğrenme isteklerini, yaşam boyu öğrenmeye karşı tutumlarını, değişime açık olmalarını olumlu anlamda etkileyeceği ifade edilebilir.

Öneriler

Araştırma sonuçları ışığında şu şekilde araştırmacılara bir takım öneriler verilebilir:

Öğretmenlerin yaşam boyu öğrenme yeterliliklerini ve yenilikçilik düzeylerini geliştirmeye yönelik program ve projeler geliştirilebilir.

Öğretmenlere yenilikçi sınıf ve öğretim ortamları yaratmaları konusunda hizmet içi eğitimler verilebilir.

Öğretmenlerin çalışma şartları incelenip yenilikçi olmaları veya yaşam boyu öğrenme açısından beklenen seviyeye ulaşmalarına engel olarak görülen durumlar ortaya çıkarılabilir.

Öğretmenlerin yaşam boyu öğrenme yeterliklerini ve yenilikçi olma durumlarını etkileyebilecek yönetici, aile, sosyal çevre, öğretim elemanları gibi farklı değişkenlere yönelik çalışmalar yapılabilir.

Araştırma sonucunda hem sınıf hem de branş öğretmenlerinin yabancı dil yeterliğinin düşük düzeyde olduğu tespit edilmiştir Bu konuda öğretmen yetiştiren eğitim fakültelerinin her öğretmenlik programına zorunlu hazırlık sınıfı dahil edilebilir. Ayrıca Milli Eğitim Bakanlığı yabancı dil konusunda eksiği olan öğretmenlere yönelik yabancı dil kursları ve isteyen öğretmenleri yurt dışı eğitim programlarına yönlendirilebilir.

Türkiye ile Avrupa ülkelerinde bulunan öğretmenlerin yaşam boyu öğrenme ve bireysel yenilikçilik düzeyleri incelenip karşılaştırılarak nicel veya nitel çalışmalar yapılabilir.