

Formation of information and professional competence of primary school teachers with Online Education.

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Abstract

The aim of this research is to provide the formation of knowledge and professional competence of primary school teachers with online education. The research was conducted in the summer term of 2020-2021. 436 primary school teachers who continue their studies in Kazakhstan participated in the research. For the research, 6 weeks of online training on professional competence was given to primary school teachers. The measurement tool called "Online Education and Vocational Competence", which was developed by the researchers and compiled by taking the opinion of experts in the field, was applied to primary school teachers. The data was shared with primary school teachers from the internet with an online questionnaire, and their participation was ensured and collected. The collected data were analyzed using the SPSS program. Frequency, percentage, average, standard deviation, minimum and maximum values were used to analyze the data obtained from the Vocational Competence measurement tool. According to the results of the research, the information was examined and in the light of the obtained information, it was observed that the distance education and professional competence status of the primary school teachers showed positive results. Even though their opinions are high, it has been concluded that the online usage status of male teachers is higher than female teachers.

Keywords: Primary School Teacher, Zoom Application, Online Education, Professional Seniority, Distance Education

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1. Introduction

One of the primary elements representing the level of development in the world is primary school education. The leading actor of education is the primary school teacher. Ordinary teaching is not enough to meet the expectations of a developing country. It is thought that the basic condition for increasing success in education is that primary school teachers are suitable for the desired qualifications (Azainil et al., 2021). A teacher equipped with the knowledge and skills required by the primary school teaching profession is a competent and highly competent teacher. The positive relationships of primary school teachers with their colleagues, students and parents are valuable for effective teaching (Havrilova et al., 2021). The importance given to education in our country is increasing day by day. Teachers have a great responsibility to increase efficiency and quality in education. Increasing the value that the teacher gives to education and exhibiting the desired behaviors in a positive way will carry that teacher further from where he is (Dagnew et al., 2019). In order for the effective and positive qualities of primary school teachers to be reflected to children effectively, they should have a healthy personality structure and appropriate personality traits. It is seen that the efforts to improve the teaching profession, which is one of the most important elements of the learning process, in various aspects, continue today. It is seen that the primary school teaching profession has taken its place today with the definition of "the profession of professions" (Kelkay et al., 2020). In this respect, primary school teacher is a key profession that plays a role in the process of teaching cognitive and psychomotor subtleties of other professions.

The primary school teacher is a learning tool, an examiner, a discipliner, a defender and a representative of middle class morality (Adler et al., 2018). Therefore, the teaching profession is quite different from other professions due to its nature. It is possible to compensate for the faults of the products of almost every profession; however, it is often not possible to compensate for the mistakes in the teacher's product (Atmazidou et al., 2016). From this point of view, primary school teachers, who are intellectual members of the society, should be trained in the best way both in terms of content knowledge and pedagogical competencies according to today's conditions. The fact that primary school teachers are equipped with only field knowledge does not mean that today's education and training activities are carried out completely with online education. When creating online education environments, it is absolutely necessary to create good environments and classes for the participants (Bicen et al., 2020). In terms of their qualifications, primary school teachers also need to develop their belief in the profession and their self (Athanasidou et al., 2017). Fulfilling the goals aimed by the education system and creating an effective learning-teaching process are among the main views of teachers. Application studies in each field are carried out based on certain theoretical concepts and principles. The development and implementation of goals, programs, equipment, teaching-learning processes in the field of education are based on pedagogical foundations and professional seniority combined with psychological principles, social ideals, value judgments and needs (Keser et al., 2016). If the pedagogical infrastructure is created at the necessary level for the teachers, that is, if the question of what the teachers know versus what the students know and what their beliefs are on this subject, an important step can be taken towards reaching the desired level in learning-teaching activities.

What competencies or qualifications primary school teachers should acquire, to what extent they should acquire these competencies and qualifications, or how to learn and develop general competencies for the teaching profession are quite broad topics (Celik Kayapinar et al., 2019). For this purpose, in this study, the literature was reviewed on what pedagogical competencies a teacher should have and how they could be developed, and suggestions were made to researchers, teachers

and relevant institutions in the light of the determined information. The professional identity and seniority structure of primary school teachers can be conceptualized with two interconnected basic structural components. These are also defined as self-behavior and identity between aggregates (Chevalier et al., 2016). His own behavior represents the primary school teacher's perceptions of himself in the professional context. It gives information about the personal qualities of the individual and develops with the development of his knowledge and skills. The interpersonal structural component is; represents the teacher's professional knowledge, skills, norms, values and culture as internalized. In this section, there are practical process information and skills coded by the teacher.

When the professional identity structure in the primary school teaching profession is examined in the context of the professional knowledge structure and accordingly within the framework of the curriculum, it is emphasized that the professional identity process evolves with affective and cognitive processes. This evolution process takes place with online education in a consistent, stable, and dynamic structure that changes over time within a certain culture and context. Different and specific lenses related to online education primary school teacher professional identity have been determined. With online education, it is seen that a group of studies on professional identity have been examined purely for personal factors in the formation of professional identity (Cicha et al., 2021).

Those who leave as a second group in studies related to professional identity generally focused on the process of teacher education programs in the construction of professional identity and determining identity aspects. The third group in professional identity studies focused on the relationship between professional identity aspects and the environment. In this context, we can say that online education plays an important role in the education and work of primary school teachers in today's years.

Related Studies

Yaroshenko and Samborska (2020) aimed to determine the importance of information and digital technologies in the pre-service education of classroom teachers in their studies and as a result, they reached the conclusion that the effectiveness of the integrated approach to the modernization of information and digital education of classroom teachers is high, and their knowledge in online and digital environments is high. When this information in the research section is integrated with the article, it can be said that the digital and online environment is very important for primary school teachers, classroom teachers and other teachers.

In their research, Umrzokova and Paradaeva (2020) investigated that the problem is related to improving the professional competence and critical thinking of teachers, and as a result, the analysis of a wide variety of scientific and methodological studies related to the examined problem, the authors, in addition to the basic competences of a modern teacher, reached the conclusions that they helped to reveal the concept and types.

In the study of Belovitskaya et al. (2021), they addressed the problem of using digital technologies for the professional formation of primary school teachers, and as a result, they reached the conclusion that teachers use it as a model for the professional formation of future primary school teachers under the conditions of digitalization of pedagogical education.

When the related researches are considered, it is thought that the power and quality of online education add more meaning to its meaning in today's period, in this context, it is thought that the researches about online education contribute to the literature, in this context, the aim of the research

is to determine the problem status, professional seniority and learn the field information. is expected to make sense. It has been mentioned in other parts of the research.

Purpose of Research

The general purpose of this study is to provide the formation of knowledge and professional competence of primary school teachers with online education. In the study, answers were sought to the following questions in order to determine the views of primary school teachers on online education of some variables:

1. What is the usage situation of primary school teachers for online education during the day?
2. Professional seniority of primary school teachers with online education; Is there a significant difference according to gender variables?
3. What are primary school teachers' views on the online education environment?
4. Is there a significant difference in the online education environment according to the variables of primary school teachers' working dimensions.

2. Method and Materials

In this section, the research method, study group, type and source of data, data collection tools and statistics used in the research will be discussed.

Research Model

This research is a descriptive study and it is aimed to be done by planning to use the survey model. The scanning method is a research approach that aims to describe an event in the past or present as it exists (Uzunboylu et al., 2018). In this research, through the scanning method, for the formation of knowledge and professional competencies of primary school teachers with online education; were described according to the variables of gender, professional seniority, and educational status.

Working Group/Participants

The research was carried out on a voluntary basis and was carried out on 436 primary school teachers working at primary school level who wanted to participate voluntarily in Kazakhstan in the spring term of 2020-2021. The questionnaire used in the research was applied to 436 primary school teachers and accepted.

Gender

In this section, the distinctions of primary school teachers by gender are given in Table 1.

Table 1 Distribution of Primary School Teachers by Gender

Gender	F	%
Male	224	51.3
Female	212	48.6
Total	436	100

As seen in Table 1, it is seen that 51.36% (224 persons) of the primary school teachers in the study group are male and 48.64% (212 persons) are female primary school teachers. In the gender section, the findings reflect the actual gender distribution.

Professional Seniority

Table 2 Distribution of Primary School Teachers by Professional Seniority

Professional Seniority	F	%
1-3 Year	280	64.22
4-6 Year	103	23.62
7-9 Year	28	6.42
Over 9 years	25	5.74
Total	436	100

In this section, the professional seniority status of primary school teachers is examined and detailed information is given in Table 2.

As seen in Table 2, among the distribution of primary school teachers in the study group according to their professional seniority, the highest 64.22% (280 people) is 1-3 years, 23.62% (103 people) is 4-6 years, 6.42% (28 people) 7-9 years and finally 5.74% (25 people) 9 years. The findings in the professional seniority section reflect the actual distribution.

Working Dimensions

In this section, the working dimensions of primary school teachers are examined and detailed information is given in Table 3.

Table 3 Working Dimensions of Primary School Teachers

Working Dimensions	F	%
Public School	219	50.22
Private school	217	49.78
Total	436	100

As can be seen in Table 3, the working dimensions of the primary school teachers in the study group were discussed and among the distribution according to their fields of study, they said that they work in public schools with the highest

50.22% (219 persons) and private schools with 49.78% (217 persons). In the study dimensions section, the findings reflect the true distribution.

Data Collection Tools

In the research, a measurement tool called Online Education and professional seniority opinion questionnaire developed by the researchers was used to collect the necessary information about primary school teachers. The developed questionnaire was examined by 6 people who had done a lot of work in the field of online education and professorship before, and unnecessary items were removed from the questionnaire. Of the 18-item questionnaire, 16 items were used and 2 items were removed from the questionnaire thanks to expert opinion. A 6-week training is planned for primary school teachers to provide online training and professional seniority formation. In addition, the Cronbach Alpha reliability coefficient of the measurement tool as a whole was calculated as 0.89.

1. Personal Information Form (Demographic Data): In the personal information form; Information such as gender, professional seniority, use of online education, and working dimensions are included.

2. Online Education and Professional Seniority Survey:

A 5-point Likert-type questionnaire was prepared in order to get the opinions of online education and professional seniority. The questionnaire consists of 16 positive statements about online education and professional seniority. In positive statements, 1 point expresses "Strongly Disagree" and 5 points "Strongly Agree". The validity and reliability scope of the questionnaire was arranged by taking expert opinions.

Analysis of Data

The data obtained from primary school teachers online and professional seniority information with the measurement tool were used using frequency (f), percentage (%), mean (M), standard deviation (SD), t-test and one-way analysis of variance (one-way ANOVA). , analyzed in the SPSS package program. The data obtained from the program are given in the findings section accompanied by tables and comments.

Application

Seminars on information about online education and professional seniority, consisting of 6 sections, were organized for 436 primary school teachers who continue to work in Kazakhstan. What is online education to primary school teachers, how to teach with online education, how to discover and spread online education, how to take exams for online education students, etc. information is given in the form of seminars. After the 4-week training, the measurement tool was applied to the primary school teachers and the data were given in the findings section in tables. The training is arranged through the

Zoom Meet program, which is preferred by most primary schools, and each section is distributed over the weeks to be limited to 80 people, each seminar is covered in a total of 50 minutes, 30 minutes of which are training, 10 minutes of which are questions and answers, and online education from primary school teachers thanks to their smart devices. They were expected to attend the lesson with video and microphone. The questionnaire applied to primary school teachers was collected by means of google form and coded in excel environment and transferred to spss program.

3. Findings

3.1 Primary School Teachers' use of online education environments during the day

The frequency of primary school teachers for online education environments during the day is given in Table 4.

Table 4 Online Education Usage Cases

Day	F	%
1 time	80	18.34
2 time	65	14.90
3 time	155	35.55
4 and above	136	31.21
Total	436	100

In Table 4, it is seen that the primary school teachers participating in the research have information about using online education environments during the day. In the light of this information, when the use of online education once a day is examined, 18.34% (80 people), 14.90% (65 people) of the findings of using online education twice, 35.55% (155 people) using online education environments 3 times. and finally, it is seen that there are 4 or more online education use cases with 31.21% (136 people). According to the above findings, it is seen that online education use cases are mostly 3 times a day during the day. Based on this information, it can be said that primary school teachers frequently use online education and spend time in online education environments during the day.

Professional seniority of primary school teachers with online education; findings according to gender variables

Table 5 Professional seniority of primary school teachers with online education; findings according to gender variables

<i>Online Education and Professional</i>	<i>Gender</i>	<i>N</i>	<i>M</i>	<i>SS</i>	<i>sd</i>	<i>t</i>	<i>p</i>
Online education	Female	212	3.61	.88	436	-5.598 *	.000
	Male	224	4.44	.46			
Professional	Female	212	3.42	1.04	436	-5.869	.000

Seniority	Male	224	<u>4.46</u>	.0.45	*
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When Table 5 is examined, even though primary school teachers have positive views on online education, there is a significant difference about the online education environment when the gender variable is considered ($t=-5.869$, $p<0.05$). While primary school female teachers' opinions about online education ($M=3.61$, $sd=0.88$) were at the level of "agree", the opinions of primary school male teachers about online education ($M =4.44$, $sd=0.46$) were at the level of "strongly agree". Based on this table, it can be said that male primary school teachers are better in online education than female teachers.

As can be seen in Table 5, there is a significant difference between primary school teachers' scores when considering the gender variable according to their professional seniority ($t=5.869$, $p<0.05$) Professional seniority scores of primary school female teachers ($M=3.42$, $sd=1.04$) are at the level of "agree". While expressing their opinions, the professional seniority scores of male primary school teachers ($M=4.46$, $sd=0.45$) were at the level of "strongly agree". Based on these results, it can be said that even if the answers of male and female students are positive, male teachers have higher answers than female teachers.

Primary School Teachers' Opinions about Online Education Environment

Table 6 Primary School Teachers' Opinions About Online Education Environment

No	Opinions of Primary School Teachers About Online Education Environment	M	SD
1	Online courses conducted in online education environments are more effective	4.48	0.55
2	Taking seminars in online education environments provides the opportunity to devote more time to my social life.	4.46	0.63
3	Instant correspondence and asking questions with the teacher who teaches the lesson in the online education environment is a very effective method.	4.43	0.59
4	Accessing the recording of the lesson taught in the online education environment is more effective in reinforcing the lesson.	4.41	0.63
5	Being able to learn information whenever and wherever I want through distance education is an advantage for me.	4.34	0.61
6	In the Zoom application environment, I do not experience any disconnection during the course.	4.46	0.63
7	I have the opportunity to learn how information technologies are used by taking courses in the online education environment.	4.41	0.63
8	It gives me pleasure to text with my friends while taking lessons in online education environment	4.36	0.69

9	I can watch course video recordings when they are uploaded in the online education environment.	4.41	0.60
10	I can download the contents of the course taught in the online education environment from the system at any time.	4.39	0.73
11	I find the seminar held with Zoom effective and useful.	4.29	0.74
12	It gives me pleasure to be in the system as a virtual agent while teaching with Zoom.	4.41	0.66
13	The virtual board in the online education environment makes me feel like I am in a formal education environment.	4.41	0.59
14	I think that my communication is very effective in the online education environment.	4.60	0.54
15	I believe that online education is very useful and effective for me in general.	4.43	0.63
16	Being in the online education environment simultaneously with my teacher increases my interest in the seminar.	4.53	0.55
Overall Average		4.44	0.63

As can be seen in Table 6, primary school teachers' views on the online education environment are included. Although there is a significant difference in most expressions, it is seen that among the most prominent expressions, "I think my communication is very effective in the online education environment" has an M=4.60 average. In addition, among the most prominent statements, it was found that "Being simultaneous with my teacher in the online education environment increases my interest in the seminar" has an M=4.53 average. When Table 5 was examined, it was found that one of the most prominent expressions, "Online courses conducted in online education environments would be more effective" had an M=4.48 average. In addition, even if each answer makes sense, the most obvious expressions on Table 5 are "I do not experience any disconnection while teaching in the Zoom application environment" and "Taking seminars in online education environments provides the opportunity to devote more time to my social life". found. These statements are important for the problem situation of the research and are important for the given seminar, It was found that "In an online education environment, instant correspondence with the teacher who teaches the lesson and asking questions is a very effective method" and "I believe that online education is very useful and effective for me in general" has an average of M = 4.43. In the light of the findings, it can be said that the effects of online education environments on primary school teachers are high.

Primary School Teachers' Views on Online Education Environment According to Working Dimensions Variables

Table 7 Primary school teachers' views on the online education environment according to the working dimensions variable

Group	N	M	SS	df	t	P	Descripti
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								on
Working Dimension s	Public Schools	219	61.51	3.31	436	37.029	.00	P<0.05
	Private Schools	227	76.24	13.18				Differenc e Significan t

When Table 7 is examined, it has been found that there is a significant difference between the scores when online education environments are considered according to the variable of primary school teachers' working dimensions. It is seen that primary school teachers working in public schools have scores (M=61.51), while teachers working in private schools have scores for online education environment (M=76.24). It can be said that (t=37,029). Considering that the opportunities and qualifications of private schools are higher than public schools, it can be said that the professional seniority in private schools is higher than that of primary school teachers working in public schools.

4. Discussion

In Özbek's (2020) study, it was aimed to investigate the classroom teachers' skills in using digital content and technology and whether this differs according to different variables. As a result, they reached the conclusion that teachers' opinions about the skills and sub-dimensions of using digital content and technology are generally high. When this value is considered with the results of the research, it has been found that primary school teachers have a high opinion of online education environments. In the light of these results, it is also thought that it is very important for students because it is essential for the lessons and teachers to meet online with today's technology and to use these technologies today. Kelly (in his study conducted in 2019, aimed to contribute to understanding the role of online courses in the profession and to develop and test the theoretical knowledge base on how teachers can be better supported through online tutoring. They concluded that this service will serve students about vocational education. Among the results of the research, online lessons make sense to teachers in every sense, and when combined with the results of the research, it is seen that this value gives positive results for primary school teachers as well. Since such situations are always encountered in studies, the problem situation is repeated in another location later on. It is thought that it will be directly effective with the result.

The studies mentioned in the discussion section are thought to be directly effective with the researcher's problem situation, and since the discussion environment is the part of the research where the best comments and the problem situation are mentioned the most, the information given in this section is of serious importance for the people who read the research. In this research, it was expected that professional seniority information would be formed on primary school teachers with online education, and it was seen that this information was formed after 6 weeks of training. In this context, in addition to the research, it was seen that the zoom application gave positive results, but since the zoom application is not a single application, it is expected that this research will be repeated

with other applications. It should not be forgotten that the tools and equipment used at all times are not unique and can produce different results. In addition, it is important for the research to be conducted in another section both for the research and for the literature.

5. Results

When the results of the research are discussed, first of all, the concept of gender is important in every study. We can say that gender is the main pillar of a study and the key to solving the problem. In this context, it was concluded that 224 male and 212 female primary school teachers participated in the research results. In addition, it is of great importance that the research is based on professional seniority and the formation of this context. In the study, professional seniority factors were examined in 436 people and it was concluded that 280 teachers had 1-3 years of experience. In the light of this information, the fact that the professional seniority of the teachers is low in years, even though it is seen as a negative for the research, it also increases the dimension of technology mastery in a positive way. In addition, it should not be forgotten that the knowledge dimensions of primary school teachers with 1-3 years of professional seniority are appropriate and fresh, which is among the strongest results of the research. Another result of the research is the study dimensions of primary school teachers.

The research was given to primary school teachers through online education via zoom application. In this context, it is expected that online education environments will be used in order to develop professional seniority skills in primary school teachers. In the research, online education usage situations on primary school teachers were examined during the day and as a result, it was concluded that 155 primary school teachers used "3 times" during the day. The fact that primary school teachers frequently come to the online environment is directly proportional to the education given and is among the expectations for the formation of a professional seniority figure. Another result of the research is online education and professional seniority; The findings were investigated according to gender variables and it is seen that male primary school teachers' views of online education environment are higher than female primary school teachers in online education environments. Even though this difference is small for women, it is among the results of the research that the opinions of female teachers also consist of positive statements. The other result is the results between genders according to their professional seniority, even if the answers of male and female students are positive, it has been concluded that male teachers have higher answers than female teachers.

Opinions are important for the results part in all respects, whether a research opinion is positive or negative carries a value and a result, in this context, it is important for articles and other researches that receive opinions in the research, among the results of the research are the opinions of primary school teachers about online education environments. Although the measurement tool, which consists of 16 items, has a positive value in each statement, among the most prominent statements, primary school teachers found that online education environments were effective, they found the zoom application useful, they felt themselves in formal education thanks to this environment, and they could access the internet from anywhere with this application. Thanks to this environment, meaningful results have been achieved such as communicating with their friends, this has a positive value for the research, the final result of the research is the determination of the views of the study dimensions on the online education environment. It was concluded that there was a significant difference between the time scores. Considering that the opportunities and qualifications of private schools are higher than public schools, it is also among the results of the research that the

professional seniority in private schools is higher than that of primary school teachers working in public schools.

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