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Processes of Integrating Teacher Training Content in Kazakhstan and Around the World

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Abstract: This study aimed to evaluate teachers' attitudes regarding teacher education content and integration processes in the world and Kazakhstan. The research was created in the survey model. The sample group of the research consisted of 481 teachers working at various levels of education in Kazakhstan in the 2023-2024 academic year. In the study, data were collected with the scale of teacher attitudes towards teacher education content and integration processes in the world and Kazakhstan. The data collection tool was developed by the researchers. In addition to the weighted mean and standard deviation, independent samples t-test and one-way analysis of variance (ANOVA) were calculated. At the end of the research, while teachers stated that they had a positive attitude towards teacher education in the world, they stated that they had a partially positive attitude towards teacher education in Kazakhstan. Teachers stated that they had a positive attitude towards teacher education content and integration processes in the world and Kazakhstan. It has been determined that male and female teachers have similar attitudes towards teacher education in the world, teacher education in Kazakhstan, and the content and integration processes of teacher education in the world and Kazakhstan. In addition, similarity was determined in teachers' attitudes towards teacher education in the world, teacher education in Kazakhstan, and the content and integration processes of teacher education in the world and Kazakhstan, according to the variable of professional seniority.

Keywords: Education, education in Kazakhstan, teacher education, teacher opinions.

1 Introduction

Within the scope of planning educational activities, states, together with their relevant institutions, have chosen to create education policies in line with the needs of the age and the country and implement these policies [1]. As a result of these policies, many factors can be mentioned in the education given to individuals to reach the desired qualifications but considering that teachers are the implementers of the policies created and the decisions taken, it can be accepted that one of the most important factors in achieving the desired goals is the teacher element [2].

1.1. Theoretical and conceptual framework

It is seen that in countries preparing for the twenty-first-century era, great importance is given to teacher training and the selection and training of people who will be teachers [3]. The reason why teacher training studies are given such importance is that the teaching profession has its unique methods and techniques [4,5]. These methods and techniques were developed over a long period, through practice and later scientific research. From this point of view, it is understood that teacher education and the teaching profession have been a subject that has been studied with great care for many years [6]. Teacher education is generally divided into the training provided before starting to work as a teacher and during teaching: initial teacher education-undergraduate education and continuing professional development or in-service training [7].

Research underlines that continuous professional development is important throughout the entire teaching career [8]. Additionally, efforts are being made to create synergy between research, education, and practice levels in teacher

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education. Teacher education should prepare candidates for expertise and a work environment with constant change and new expectations [9]. Teachers must be equipped to be an effective part of the education system. The initial teacher education phase and, equally important, continuing professional development develop in teachers the knowledge and skills necessary to develop the potential of teaching and students and reveal their personal qualities [10].

In addition, teacher education should also encourage the personal and professional development of teachers throughout their careers [11]. The professional role requires teachers to develop a reflective and analytical approach to their work lives. The main purpose of teacher education is to improve the qualifications, knowledge, and skills of teachers to meet the needs of students [12]. For this reason, evaluating the teacher training practices and integration processes carried out in our country in parallel with the teacher training practices in the world appears as a necessity in terms of the field of research.

1.2. Related research

The study aims to contribute to the growing body of work with empirical evidence regarding the multidimensional structure of teacher education reform. As a result, determinations have been made to create conceptual differences and increase capacity in schools so that it becomes a permanent change in classrooms over time [29]. In their research, Dickson et al. [13] aimed to determine the experiences of candidate teachers in the first year of their profession. They found that candidate teachers had problems, especially in classroom management. Cornu [14] evaluated teacher education in France; In his study of the university and professionalization, he primarily described the characteristics of the French system in teacher recruitment and education and important developments in teacher education. In the study, it was stated that teacher education has progressed greatly in France in the last 25 years to increase the role of universities in teacher education and to train future teachers more qualified.

Hu and Verdugo [15] stated that past reforms and educational indicators played an important role in teacher education in China. Therefore, the policies implemented in teacher education in China have been scrutinized. As a result of the research, reforms in teacher education emerged from the political and economic needs of the country rather than the needs of the Chinese people. Lim [16] in his study of teacher education in Singapore, stated that the National Institute of Education has been responsible for teacher education in Singapore since 1950. It has been stated that the National Education Institute is one of the leading institutes in the world and has an important role in educational research, pedagogical program-based research, and ensuring coordination between schools and the ministry. In their research, Almeida and Castelo [30] developed a technological platform to support psychotechnical testing in schools. The application is hosted on the web and has been created using only open-source technologies. The application allows teachers to create new psycho-technical tests in various technical and scientific fields. Each psychotechnical test consists of multiple multiple-choice questions, and the teacher can specify the list of alternative answers and specify the maximum response time for each question. Students can visualize a list of available psychotechnical tests organized by topic. The platform records students' performance in various fields and allows students to practice and improve their skills. In this way, students can be better prepared for job interviews and therefore the job market.

Other research results [31] on higher education teaching staff proved those professors who are interested in this method of professional development are strongly and intrinsically motivated in didactic careers and are ready to sacrifice a lot of personal energy and resources to improve their professional and personal skills necessary in their work with students.

1.3. Purpose of the research

The purpose of this research was to evaluate the attitudes of teachers regarding teacher education content and integration processes in the world and Kazakhstan. For this purpose, answers were sought to the following research questions.

1. What are the attitudes of the teachers participating in the research towards teacher education content and integration processes in the world and Kazakhstan?
2. Do the attitudes of the teachers participating in the research regarding teacher education content and integration processes in the world and Kazakhstan differ according to the gender variable?
3. Do the attitudes of the teachers participating in the research regarding teacher education content and integration processes in the world and Kazakhstan differ according to the professional seniority variable?

2 Methodology

In this section, detailed information is given about the research method and data collection. Additionally, the study group and the ethical process of the research are explained in this section.

2.1. Research method

The research was created in the survey model. In general, survey research is carried out to determine the characteristics of a sample group such as beliefs, attitudes, and expectations. In survey research, larger sample groups are studied than in other research methods and a situation determination is made [17]. With the scanning model applied within the scope of this research, teacher attitudes toward teacher education content and integration processes in the world and in Kazakhstan were evaluated.

2.2. Participants

The sample group of the research consists of teachers working in various primary, secondary, and high schools in Kazakhstan in the 2023-2024 academic year. The demographic characteristics of the teachers are given in Table 1.

Table 1: Demographic characteristics of teachers

Gender	F	%
Female	233	48.4
Male	248	51.6
Professional Seniority	F	%
1-5 Years	123	25.5
6-10 Years	105	21.8
11-15 Years	94	19.6
16 years and above	159	33.1
Total	481	100

Table 1 shows the demographic distribution of the teachers participating in the research according to their gender and professional seniority. 48.4% of teachers are women and 51.6% are men. 25.5% of the teachers participating in the research have 1-5 years of professional seniority, 21.8% have 6-10 years of seniority, 19.6% have 11-15 years of seniority and 33.1% have 16 years or more of professional seniority.

2.3. Data collection tools

In the study, data were collected with the scale of teacher attitudes towards teacher education content and integration processes in the world and Kazakhstan. The scale was developed by researchers. In the first stage, scale items were determined. In this process, research on teacher education was examined. 41 items were created to measure teachers' attitudes. The compliance of the items with the rules of grammar was evaluated by a linguist and the necessary parts of the items were corrected. The opinions of 5 experts were consulted to evaluate the content validity of the created items.

Experts selected 28 items that they found suitable for the scope of the research among the 41 items in the item pool. Later, a pilot study working group was formed. There are 291 teachers in the study group. Teachers who participated in the pilot application were not included in the sample of the research. The scale study with teachers was carried out in the schools where the teachers worked. Exploratory factor analysis was applied to the data obtained after the pilot application with the SPSS 25.0 statistical program. Bartlett's test of sphericity and Kaiser-Meyer Olkin (KMO) was calculated. KMO value was 0.827 and Bartlett's Sphericity test was found to be significant. To calculate the discrimination power of the items, the Pearson correlation coefficient was calculated. Afterward, with the Promax rotation technique applied, items with factor loads greater than 0.32 were included in the scale. To determine the factor structure, the eigenvalues of the items were examined. A two-factor structure with an eigenvalue greater than 1 was detected in the pilot scale consisting of 28 items. 4 items that did not load on these two factors were removed from the scale. After removing 4 items from the scale, it was seen that the variance value explained by the remaining 24-item scale was 81.236%. It was determined that the load values on the first factor varied between 0.807 and 0.766, and the load values on the second factor varied between 0.759 and 0.710. 11 items were determined in the first factor, and 13 items in the second factor. Following these procedures, confirmatory factor analysis was performed using the SPSS Amos program.

At this stage, the goodness of fit indices of the pilot scale consisting of 24 items were examined. In Table 2, the goodness of fit indices is taken as criteria [18] and the goodness of fit values of the teacher attitudes scale regarding teacher education content and integration processes in the world and Kazakhstan are given.

Table 2: Goodness-of-fit indexes of the scale of teacher attitudes towards teacher education content and integration processes in the world and in Kazakhstan

	X^2	df	X^2/ df	GFI	CFI	RMSA
Scale	278.41	177	1,572	0.889	1,581	0.036
Good Fit Values			≤ 3	≥ 0.90	≥ 0.97	≤ 0.05

Acceptable Fit Value			≤ 4 - 5	0.89 – 0.85	≥ 0.90	0.06 – 0.08

X^2 = Chi Square; df = Degrees of Freedom; GFI = Goodness of Fit Index, CFI = Comparative Fit Index, RMSA = Root Mean Square Errors of Approximation

Table 2 shows the fit values, good fit values, and acceptable fit values obtained from the scale. The results show that X^2/ df (1.572), CFI (1.581), and RMSA (0.036) values have a good fit, while the GFI (0.889) value has an acceptable fit. These data reveal that the scale is applicable. In line with the data obtained, the reliability of the scale required for the application was determined. In this process, Cronbach's Alpha coefficient for the sub-dimensions and the overall scale was calculated. Cronbach's Alpha coefficient was found to be 0.81 for the first factor, Cronbach's Alpha coefficient was 0.89 for the second factor, and Cronbach's Alpha coefficient was 0.85 for the overall scale of teacher attitudes towards teacher education content and integration processes in the world and Kazakhstan. While the final form of the scale was being prepared for application, a 5-point Likert type was also created.

Item score ranges are considered equal. Scale scores range from strongly agree = 5 points to strongly disagree = 1 point. In this case, 1.00 to 1.80 represents a very negative attitude, 1.81 to 2.60 represents a negative attitude, 2.61 to 3.40 represents a partially positive attitude, 3.41 to 4.20 represents a positive attitude, and 4.21 to 5.00 represents a very positive attitude. The first factor is named teacher education in the world, and the second factor is named teacher education in Kazakhstan.

2.4. Data collection process

During the research data collection process, scale development and scale application activities with the teachers participating in the research were carried out in the school environment. Interviews with teachers were conducted in groups of 10-15 people. During the scale application activities, it was determined that teachers completed each scale form in approximately 15-20 minutes. It took approximately 6 weeks to complete all applications and collect all data.

2.5. Compliance with Ethics

Before the interviews with the teachers during the scale development and application stages, the necessary permissions were obtained from the schools where the teachers worked. Small groups were formed so as not to disrupt the teachers' schedules. A research information form regarding the purpose and ethical process of the research was distributed to teachers and they were asked to read it. Then, the research voluntary participation form was distributed and the teachers were asked to state that they participated in the research of their own free will. The research was conducted entirely based on voluntary participation. In addition, the researchers showed great sensitivity in avoiding ethical violations during the writing phase of the research.

2.6. Data analysis

Data were analyzed with the SPSS 25.0 program. According to the normality test (Skewness-Kurtosis) results, it was decided to perform parametric or non-parametric tests on the data. It was determined that Skewness = -0.63 and Kurtosis = 1.05. These results indicate that parametric inverses can be applied to the data. In addition to the weighted mean and standard deviation, independent samples t-test and one-way analysis of variance (ANOVA) were calculated.

3 Results

The data obtained through the application of the teacher attitudes scale regarding teacher education content and integration processes in the world and in Kazakhstan are included in this section.

Table 3: Weighted averages and standard deviations of the scale of teacher attitudes towards teacher education content and integration processes in the world and in Kazakhstan

	M	SD
Teacher education around the world	4.03	0.842
Teacher training in Kazakhstan	3.29	0.605
overall scale	3.62	0.686

In Table 3, the weighted averages and standard deviations of the teachers participating in the research on the scale of teacher attitudes towards teacher education content and integration processes in the world and in Kazakhstan are calculated. While teachers stated that they had a positive attitude in the teacher education sub-dimension in the world (M=4.03, SD=0.882), they stated that they had a partially positive attitude in the teacher education sub-dimension in Kazakhstan (M=3.29, SD=0.605). In terms of teachers' attitudes towards teacher education content and integration processes in the world and in Kazakhstan; (M=3.62, SD=0.686) showed that they had a positive attitude with their answers.

Table 4: Independent variables t-test results of teacher attitudes towards teacher education content and integration processes in the world and in Kazakhstan by gender

Dimension	Gender	N	*M*	SS	t	p
Teacher education around the world	Female	233	4.09	0.690	6,590	.220
	Male	248	3.97	0.665		
Teacher training in Kazakhstan	Female	233	3.20	0.611	6,256	,210
	Male	248	3.41	0.635		
Overall Scale	Female	233	3.60	0.815	6,535	,260
	Male	248	3.65	0.807		

Integration processes in the world and Kazakhstan according to gender are evaluated in Table 4. There was no significant difference between the attitudes of female teachers (M=4.09, p>0.05) and male teachers (M=3.97, p>0.05) in the sub-dimension of teacher education in the world. In Kazakhstan, no significant difference was found between the attitudes of female teachers (M=3.20, p>0.05) and male teachers (M=3.41, p>0.05) in the teacher education sub-dimension. There is a significant difference between the attitudes of female teachers (M=3.60, p>0.05) and male teachers (M=3.65, p>0.05) in the scale of teacher attitudes towards teacher education content and integration processes in the world and Kazakhstan. No difference was detected.

Table 5: One-way analysis of variance (ANOVA) results of teacher attitudes towards teacher education content and integration processes in the world and in Kazakhstan according to professional seniority

Dimension	Professional seniority	N	*M*	SS	t	p
Teacher education around the world	1-5 Years	123	4.11	6,853	4,905	.207
	6-10 Years	105	3.94	6,731		
	11-15 Years	94	4.04	6,382		
	16 years and above	159	3.99	6,855		
Teacher training in Kazakhstan	1-5 Years	123	3.28	4,773	4,570	,211
	6-10 Years	105	3.30	4,682		
	11-15 Years	94	3.35	4,210		
	16 years and above	159	3.21	4,189		
Overall Scale	1-5 Years	123	3.64	6,284	4,880	.378
	6-10 Years	105	3.72	6,383		
	11-15 Years	94	3.53	6,662		
	16 years and above	159	3.60	6,905		

Table 5 shows the one-way analysis of variance (ANOVA) results of the attitudes of the participating teachers towards teacher education content and integration processes in the world and in Kazakhstan, according to professional seniority. In the sub-dimension of teacher education in the world, 1-5 years (M=4.11, p>0.05), 6-10 years (M=3.94, p>0.05), 11-15 years (M=4, 04, p>0.05) and 16 years and above (M=3.99, p>0.05) there was no significant difference between the attitudes of teachers with professional seniority. In Kazakhstan, in the teacher education sub-dimension, 1-5 years (M=3.28, p>0.05), 6-10 years (M=3.30, p>0.05), 11-15 years (M=3.35, p>0.05). There was no significant difference between the attitudes of teachers with professional seniority and 16 years or more (M=3.21, p>0.05). In the scale of teacher attitudes towards teacher education content and integration processes in the world and Kazakhstan, 1-5 years (M=3.64, p>0.05), 6-10 years (M=3.72, p>0.05) No significant difference was detected between the attitudes of teachers with professional seniority of 11-15 years (M=3.53, p>0.05) and 16 years and above (M=3.60, p>0.05).

4 Discussions

The data obtained from the teacher attitudes scale of the teachers participating in the research regarding the content of teacher education and integration processes in the world and Kazakhstan were evaluated. While teachers stated that they had a positive attitude towards teacher education in the world, they stated that they had a partially positive attitude towards teacher education in Kazakhstan. Teachers stated that they had a positive attitude towards teacher education content and integration processes in the world and Kazakhstan. Teacher attitudes towards teacher education content and integration processes in the world and in Kazakhstan were evaluated according to the gender variable.

As a result of the evaluation, it was determined that male and female teachers had similar attitudes towards teacher

education in the world, teacher education in Kazakhstan, and the content and integration processes of teacher education in the world and Kazakhstan. The attitudes of the teachers participating in the research towards the content of teacher education and integration processes in the world and Kazakhstan were evaluated according to professional seniority. As a result of the evaluation, teachers with 1-5 years, 6-10 years, 11-15 years, and 16 years and above of professional seniority were evaluated regarding the content and integration processes of teacher education in the world, teacher education in Kazakhstan and teacher education in the world and Kazakhstan.

They were found to have similar attitudes. When the research in the field is examined, many studies are found examining teacher training programs in different countries [12-19-20-21-22-23]. It is seen that teacher training programs are evaluated in Kazakhstan and research is conducted to evaluate the current problems related to teacher training and to address teacher education content and integration processes [24-25-26-27]. Pantic and Wubbels [28] point out that many of the concerns expressed in studies on current teacher training and teacher competence have been similar in many countries in teacher education over the last two decades. They underlined that some of these concerns are related to balancing problems between theoretical and practical knowledge required for teachers.

5 Conclusions

Educational policies have had an indisputable importance in raising qualified individuals in societies all over the world from past to present. At the basis of this process, we encounter a field open to development and innovation regarding teacher training. Therefore, this research aimed to evaluate the attitudes of teachers regarding the content of teacher education and integration processes in the world and Kazakhstan. At the end of the research, while teachers stated that they had a positive attitude towards teacher education in the world, they stated that they had a partially positive attitude towards teacher education in Kazakhstan.

Teachers stated that they had a positive attitude towards teacher education content and integration processes in the world and Kazakhstan. It has been determined that male and female teachers have similar attitudes towards teacher education in the world, teacher education in Kazakhstan, and the content and integration processes of teacher education in the world and Kazakhstan. In addition, similarity was determined in teachers' attitudes towards teacher education in the world, teacher education in Kazakhstan, and the content and integration processes of teacher education in the world and Kazakhstan, according to the variable of professional seniority.

6 Recommendations

The following suggestions have been developed in line with the problems obtained from the research.

1. It is recommended that the reasons underlying teachers' partially positive attitudes towards teacher education in Kazakhstan be investigated within the scope of qualitative research.
2. It is recommended to conduct similar research with teacher candidates studying in education faculties.
3. It is recommended to carry out studies in which the teacher training policies and educational programs implemented in education faculties in Kazakhstan are evaluated by other stakeholders of education.

Conflicts of Interest Statement

The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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