

Modern Approaches to Assessment in Preschool Education

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Abstract: The purpose of this research is to evaluate the attitudes of preschool teachers regarding the application of modern approaches in the evaluation process in preschool education. In this research, the survey model, one of the quantitative research models, was used. Two hundred and ninety-one (291) preschool teachers teaching in various kindergartens in Kazakhstan constitute the sample group of the research. As a data collection tool in the study, the attitude scale of preschool teachers regarding the application of modern approaches in the evaluation process in education was developed by the researchers. Independent variables T-test was applied in the analysis of bivariate data, and One-way ANOVA was applied in the analysis of more than two variable data. As a result of the research, it has been determined that preschool teachers have a high degree of positive attitude towards the application of modern approaches in the evaluation process in education. It has been determined that male and female teachers have a similar attitude towards the application of modern approaches in the evaluation process in education. When professional seniority is taken into consideration, it has been determined that preschool teachers with 1-5 years of professional seniority have a higher positive attitude towards the application of modern approaches in the evaluation process in education compared to teachers with 6-10 years of professional seniority and 11 years or more of professional seniority.

Keywords: Assessment; modern approaches; preschool education; preschool teachers.

1 Introduction

The idea that the first six years following birth are one of the most important periods in a person's life and that the care and education during this period significantly determine what kind of person a person will be in the future has become an opinion accepted by the majority of experts today [1,2]. For this reason, just as it is important for the child to be fed and cared for in these early years, as well as receiving love, it is equally important for the child to live in appropriate environmental conditions and be educated to adapt to the society he or she lives in [3].

1.1. Theoretical and conceptual framework

Preschool education covers the period between the ages of 0 and 6, from the moment an individual is born until the time he or she starts primary education [4]. This training, having an important place in the child's later years, is expressed as the education and development process given in institutions and families, in which the child's social, emotional, physical, language, and mental development is significantly completed, and within this framework, the child's personality begins to form [5-10].

A preschool education program is a program that includes the learning processes of children in preschool education institutions, explains the support of their holistic development through achievements and indicators, takes into account their differences, and guides preschool teachers [11,12]. There are gifted children who need critical attention in assessing their specialties there a preschool program should take this into a major factor of evaluation [13]. In evaluation in the preschool period, various techniques are used to recognize and understand the child in the preschool period. In this period, evaluation is defined as the process of obtaining information about the child's development and learning course through different recognition techniques [14]. Through the educational activities implemented during this period, children's personality development is contributed, and children are prepared for primary education [15,16]. Measurement and evaluation, which is the last step of these education levels, guides the teacher about the effectiveness of the other levels. In early childhood education, the greatest responsibility falls on preschool teachers to ensure that the process of knowing and evaluating the child is qualified [17]. Preschool teachers must have qualifications for the

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evaluation element [18]. Increasing the effectiveness and quality of preschool education is very valuable. It is very important to state that unsatisfied teachers, suffering from stress or emotional exhaustion, are less equipped to promote children's development [19]. As there should be a strong flair and motivation to embark on the profession as a preschool teacher [20]. In this regard, educators have important duties in adopting and implementing child-centered approaches in creating preschool education programs [21,22].

At this point, it is possible to talk about some approaches put forward for the preschool period. Reggio Emilia approach: One-to-one observations are made in children's natural environments, their development is followed, and recognition-evaluation practices are shaped in line with the children's wishes [23]. In the Montessori approach, evaluation based on achievement level is avoided, and alternative evaluation practices are preferred to evaluate children's high-level cognitive skills [24-26]. In the High Scope approach, evaluation consists of two stages: evaluation of the child and the evaluation of the program. In addition to the use of standard tests in the evaluation of the child, the authentic evaluation approach is based on the evaluation of the child's performance by people he knows personally in his natural environment and addresses the holistic development of the child [27]. In the Waldorf approach, the evaluation process is carried out very meticulously by teachers. It is thought that carrying out the evaluation process with traditional methods limits the holistic evaluation of the child and does not reflect the child's real performance [28]. The primary duty of the teacher in Waldorf classes is to observe the child from the moment he enters the classroom, and observations form the basis of the approach. During the evaluation process, the child's multifaceted development is prioritized, and programs are carried out to improve the child's strengths and weaknesses [28].

The concept of assessment in preschool education covers a broad procedure used to collect information necessary to understand the general functioning of children. These procedures consist of standardized tests, observation, family and teacher opinions, evaluation of work samples, records, and environmental factors [29]. In an educational approach where evaluation in preschool education is so important, it was deemed necessary to evaluate teacher attitudes towards modern approaches to preschool evaluation.

1.2 Related research

Brown and Rolfe [30] examined the perspectives of educators and early childhood educator candidates regarding evaluation techniques during the evaluation process in early childhood. In the examinations, it was seen that the majority of early childhood educators were using techniques in informal assessment, and early childhood educator candidates were largely close to techniques based on informal assessment in early childhood. Pretti-Frontczak et al. [31] benefited from the opinions of 586 teachers in their study to determine to what extent preschool teachers in Ohio used assessment and curriculum. In this study, it was concluded that the teachers' practices and the curriculum were not parallel. In their research, Hoover [32] and Havigerová et al., [33] aimed to determine whether the assessments made regarding language, mathematics, and motor skills in kindergartens constitute a valid indicator in determining the child's need for support. The study concluded that the evaluations made in kindergarten provide insight into determining the areas in which the student needs support. In his research, Nah [34] compared the evaluation practices carried out in kindergartens in England and Korea. As a result of the research, it was determined that a systematic evaluation defined by various methodological and powerful procedures was applied to children in England; In Korea, it has been determined that fragmented and unsystematic evaluation methods are used.

Bagnato et al. [35] aim to compare authentic assessment, which is known as the best practice in the assessment of young children, in their study, being aware of the limitations of traditional assessment. According to the findings, it has been revealed that authentic assessment provides higher quality assessment compared to traditional assessment practices in early childhood. In his research, Collado [36] aimed to define the formative evaluation processes of preschool teachers in the context of school, classroom, and personal values and to identify the obstacles that affect the ability of preschool teachers to apply formative evaluation processes in their daily education flows. In the study, it was determined that teachers' lack of knowledge regarding formative assessment made the process difficult and that there was a discrepancy between teachers' practices and values in their educational and evaluative approaches.

Ntumi [37] conducted a study that aimed to identify the challenges that preschool teachers face while implementing the program. In the results of working, it was determined that teachers had difficulty understanding the program, the difficulties they experienced while applying it, the lack of family contribution to education, and the lack of materials. In his research, Gehrke [38] aimed to determine the evaluation methods used in the preschool education institution that cooperates with the university. The opinions of 12 preschool teachers were used in the research. In the study, it was determined that teachers used a file consisting of checklists, observations, anecdotal records, and children's work to evaluate children. In his research, Planck [39] aimed to determine the knowledge, attitudes, and practices of preschool teachers regarding assessment in early childhood. As a result of the research, it was revealed that teacher-parent, parent-child, and child-child relationships are very important in evaluating children in a meaningful way [40].

1.3 Purpose of the research

The purpose of this research is to evaluate the attitudes of preschool teachers regarding the application of modern approaches in the evaluation process in preschool education. In the research, sub-goals were determined for this purpose and answers were sought for the sub-goals.

1. What are the attitudes of the preschool teachers participating in the research towards the application of modern approaches in the evaluation process in education?
2. Do the attitudes of the preschool teachers participating in the research towards the application of modern approaches in the evaluation process in education differ according to the gender variable?
3. Do the attitudes of preschool teachers participating in the research towards the application of modern approaches in the evaluation process in education differ according to the professional seniority variable?

2 Method

The method used in the research, data collection tools, development, application and evaluation process, and ethical principles are presented to the reader in this section.

2.1 Research method

In this research, the survey model, one of the quantitative research models, was used. Screening models aim to reveal the situation that existed in the past or today as it exists. The sample of the research is evaluated within its conditions [41]. The attitudes of the preschool teachers who participated in the research towards the application of modern approaches in the evaluation process in education were discussed in the screening model.

2.2 Participants

291 preschool teachers teaching in various kindergartens in Kazakhstan constitute the sample group of the research. Demographic characteristics of the kindergarten teachers who participated in the research are given in Table 1.

Table 1: Demographic information of teachers

Gender	F	%
Female	165	56.7
male	126	43.3
Total	291	100
Seniority	F	%
1-5 years	93	31.9
6-10 years	95	32.7
11 years and above	103	35.4
Total	291	100

Table 1 shows the distribution of kindergarten teachers participating in the research according to gender and professional seniority. 56.7% of kindergarten teachers are women and 43.3% are men. 31.9% of the teachers have 1-5 years of professional seniority, 32.7% have 6-10 years of seniority and 35.4% have 11 years or more of professional seniority.

2.3 Data collection tools

As a data collection tool in the study, the attitude scale of preschool teachers regarding the application of modern approaches in the evaluation process in education was developed by the researchers. During the scale development process, a literature review was conducted, and research was conducted on the items to be included in the scale. Following the research, 29 items were created, and the created items were converted into a draft form. The form was prepared as a 5-point Likert. For each item in the form, score ranges were determined as 5 points for strongly agree, 4 points for agree, 3 points for partially agree, 2 points for disagree and 1 point for strongly disagree. The closer the teachers' answers are to 1, the lower the attitude, and the closer to 5, the higher the attitude. The created form was presented to 4 experts, and they were asked to evaluate the content validity of the items. As a result of their evaluation, the experts stated that the 16 items in the form were suitable to be used in the scale in terms of scope. The form, consisting of 16 items, was applied to 210 kindergarten teachers. 210 kindergarten teachers participated only in the scale development phase of the research and were not included in the sample group of the research.

After Form 210 was applied to the kindergarten teacher, Kaiser-Meyer-Olkin (KMO) and Bartlett Sphericity tests were calculated for the data set obtained. Calculations reveal that the KMO coefficient is 0.88 and the Bartlett Sphericity test

of sphericity is $p < 0.05$. The results obtained reveal that the data set is suitable for factor analysis. Two-factor analyses were conducted during the scale development process of the research. One of these is exploratory factor analysis (EFA) and the other is confirmatory factor analysis (CFA). EFA was carried out with the SPSS 25.0 statistical program. In the EFA stage, the eigenvalues of the items in the form were examined. A single-factor structure with an eigenvalue greater than 1 emerged in the scale form. Two items that loaded on another factor were removed from the scale. Item factor loadings of the single-factor structure were determined. It was determined that item factor loadings varied between 0.67 and 0.89. SPSS Amos was used to verify the single-factor structure. CFA was performed with the 25.0 statistical program.

At this stage, the goodness of fit index of the data set was checked. The adequacy values determined by Schermelleh-Engel et al. [42] were determined as criteria in the goodness of fit indices. In this direction; Goodness of Fit Index (GFI), Normed Fit Index (NFI), Relative Fit Index (RFI), Comparative Fit Index (CFI), and Incremental Fit Index (IFI) values greater than 0.90 indicate a sufficient level of fit. Standardized root mean Square Residuals (SRMR) and Root mean Square Error of Approximation (RMSEA) indicate a good fit if it is less than 0.05, and an acceptable fit if it is below 0.10. The ratio of the chi-square value to the degrees of freedom is below 5, indicating a good fit. As a result of CFA, it was determined that the ratio of chi-square value to degrees of freedom was at a sufficient level below 5.

When looking at the fit index values, it was found that $RMSEA = 0.01$, $SRMR = 0.02$, $GFI = 0.97$, $NFI = 0.99$, $RFI = 0.98$, $CFI = 1.07$, and $IFI = 1.27$. CFA results reveal that the model is a good fit. After EFA and CFA were performed, the reliability study of the scale form was conducted. Cronbach's alpha internal consistency coefficient was calculated to determine reliability. The Cronbach alpha value of the attitude scale regarding the application of modern approaches in the evaluation process of preschool teachers in education was found to be 0.87. The results obtained revealed that the reliability of the scale was high. Two questions created to determine the demographic characteristics of teachers' gender and seniority were added to the attitude scale regarding the application of modern approaches in the evaluation process of preschool teachers in education, making it ready for application.

2.4 Data collection process

The attitude scale regarding the application of modern approaches in the evaluation process of preschool teachers in education, developed by the researchers to collect research data, was applied face-to-face to the kindergarten teachers participating in the research in the institutions where they work. The applications were carried out at a time convenient for teachers and educational institutions. While the time for each teacher to fill out the attitude scale was determined as approximately 15-20 minutes, it took approximately 2 months to complete the applications with all teachers participating in the research.

2.5 Compliance with Ethics

Permission to conduct the research was obtained from the educational institutions where the participating teachers worked. A written statement was made to kindergarten teachers working in institutions that agreed to contribute to the conduct of the research, regarding the conduct of the research, its purpose, ethical principles, and confidentiality of personal data. A research voluntary participation form was also given to kindergarten teachers who had information about the research, and teachers who agreed to participate in the research were asked to sign the voluntary participation form. Research data was collected in two stages. The first stage is scale development, and the second stage is scale application. The same procedures were followed when collecting data in both stages.

2.6 Data analysis

After collecting the research data, the SPSS 25.0 statistical program was used for analysis. In the analysis, normal distribution tests of the data were given priority. As a result of the Kolmogorov – Smirnov test ($p > .05$), it was determined that the data set showed a normal distribution and parametric tests were applied to the data set. Independent variables T-test was applied in the analysis of bivariate data, and One-way ANOVA was applied in the analysis of more than two variable data.

3 Result

Table 2 shows the weighted averages and standard deviations of the attitude scale of preschool teachers regarding the application of modern approaches in the evaluation process in education.

Table 2: Attitude scale weighted averages and standard deviations

	X	SS
Virtual reality attitude scale	4.09	0.822

Table 2 shows the weighted means and standard deviations ($X=4.09$, $SD=0.822$) of the attitude scale of preschool

teachers regarding the application of modern approaches in the evaluation process in education. These values reveal that preschool teachers have a high degree of positive attitude towards the application of modern approaches in the evaluation process in education.

In Table 3, the T-test results of the independent variables of the attitudes of the preschool teachers participating in the research towards the implementation of modern approaches in the evaluation process in education are given according to the gender variable.

Table 3: T-test results of independent variables according to gender variable

Gender	N	X	SS	F	P.
Female	165	4.15	0.640	4,733	.890
male	126	4.01	0.839		

Table 3 shows the T-test results of the independent variables ($F=4.733$, $P>.0.5$) of the attitudes of the preschool teachers participating in the research towards the application of modern approaches in the evaluation process in education according to the gender variable. These values reveal that male and female preschool teachers have similar attitudes toward the application of modern approaches in the evaluation process in education.

The One-way ANOVA results of the attitudes of the preschool teachers participating in the research towards the application of modern approaches in the evaluation process in education according to the professional seniority variable (table 4).

Table 4: One-way ANOVA results according to professional seniority variable

Professional Seniority	N	X	SS	F	P.
1-5 years	93	4.32	0.651	12,620	,000
6-10 years	95	4.01	0.803		
11 years and above	103	3.96	0.898		

The One-way ANOVA ($F=12.620$, $P<0.5$) results of the attitudes of the preschool teachers participating in the research towards the application of modern approaches in the evaluation process in education according to the professional seniority variable. These values reveal that preschool teachers with 1-5 years of professional seniority have a higher positive attitude towards the application of modern approaches in the evaluation process in education than teachers with 6-10 years of seniority and 11 years or more of seniority.

4 Discussion

The findings obtained from the research reveal that preschool teachers have a high degree of positive attitude towards the application of modern approaches in the evaluation process in education. In their study, Struyven et al. [43] revealed that most of the teachers did not have the desired level of knowledge and skills about alternative measurement and evaluation. When this evaluation is evaluated together with the findings of our research, it creates a perception that although teachers have a high degree of attitude, they do not have sufficient knowledge and skills about alternative measurement and evaluation practices. Alkharusi et al. [44] also aimed to determine teachers' attitudes towards measurement and evaluation, their competence perceptions, and literacy levels. As a result of the research, it was determined that the majority of teachers had positive and high attitudes toward measurement and evaluation. In his study, Planck [39] aimed to reveal the knowledge, attitudes, and practices of preschool teachers regarding assessment in early childhood. As a result of the research, it was determined that teachers support modern approaches that emphasize the importance of multifaceted communication regarding the evaluation process of students. Hanes [45] also revealed in his research that preschool teacher exhibited positive attitudes toward alternative evaluation approaches during the evaluation process.

When the attitudes of the preschool teachers participating in the research towards the application of modern approaches in the evaluation process in education were evaluated according to the gender variable, it was determined that male and female preschool teachers had similar attitudes. Çalışkan and Yazıcı [46] also developed an attitude scale for measurement and evaluation in their research. In their studies where researchers examined teachers' attitudes in terms of different variables, they revealed that there was no significant difference in teacher attitudes according to the gender variable.

It is seen that the attitudes of preschool teachers towards the application of modern approaches in the evaluation process in education differ according to the professional seniority variable. The findings reveal that preschool teachers with 1-5 years of professional seniority have a higher positive attitude than teachers with 6-10 years of seniority and 11 years or more of seniority. Peker and Gülle [47] also concluded in their study that as teachers' professional seniority increases, their measurement and evaluation knowledge levels decrease.

5 Conclusions

Evaluations regarding education, as well as the education provided in the pre-school period, are extremely important in determining the quality of education and monitoring the development of the child. Correct evaluation practices play a supporting role in the process of implementing a good preschool education. Considering the developing technology and the needs of the age we live in, modern approaches to the evaluation process in preschool education have been included in education. In this direction, this study aimed to evaluate the attitudes of preschool teachers regarding the application of modern approaches in the evaluation process in preschool education. As a result of the research, it has been determined that preschool teachers have a high degree of positive attitude towards the application of modern approaches in the evaluation process in education. It has been determined that male and female teachers have a similar attitude towards the application of modern approaches in the evaluation process in education. When professional seniority is taken into consideration, it has been determined that preschool teachers with 1-5 years of professional seniority have a higher positive attitude towards the application of modern approaches in the evaluation process in education compared to teachers with 6 years or more of professional seniority.

In line with the findings obtained from the research, suggestions were developed for preschool teachers and future research. It is seen that the attitudes of preschool teachers towards the application of modern approaches in the evaluation process in education differ according to the professional seniority variable. Preschool teachers need to be encouraged, informed, and supported regarding the application of modern approaches in the evaluation process in education through in-service training programs. It is thought that in future research, examining preschool teachers' attitudes towards the application of modern approaches in the evaluation process in education in terms of different variables and conducting an in-depth examination by taking their opinions will contribute to the field.

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Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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