

## **Improving Preschool Teachers Attitude towards the Persona Doll Approach and Determining the Effectiveness of Persona Doll Training Procedures<sup>i</sup>**

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### **Abstract**

The study features two basic steps. The first step of the research aims to develop a scale to measure the attitude of preschool teachers towards the Persona Dolls Approach and to verify its validity/reliability through a general survey. The cohort employed in the research was drawn from a pool of preschool teachers working in and around the cities of Çanakkale and Mardin, Turkey during the 2011-2012 academic year. The first sampling taken with the purposive sampling method was carried out in June 2011 with 187 preschool teachers employed in schools in and around the city of Çanakkale. Validity was measured through the application of structure and scope verification procedures, while reliability was established using the test - re test method and internal consistency procedures. The resulting analyses presented a scale with KMO Value (Kaiser Meyer Olkin) of 0.812 and an internal consistency value of 0.916, where a value approximate to +1.00 indicates a high level of internal consistency. The second step of the research involved a cohort of 46 preschool teachers from Mardin and surrounding districts, 23 in the trial group and 23 in the control group. The aim was to assess whether the trial group teachers would present a change of attitude following a two-day training in the Persona Doll Approach. A pre test-post test and control group trial method was employed for this purpose. The groups were equalized taking into account the validity-reliability studies related to the teacher survey and attitude scales from the first step of research, and related and unrelated Group T Tests were applied in data analysis. At the conclusion of the experimental model, comparing pre and post-test results, significant levels of positive attitude change were perceived in terms of measurable variances among teachers in the experimental group receiving instruction in the Persona Doll Approach. These results would appear to imply the positive effects of training in the Persona Dolls Approach for teachers in the experimental group.

**Keywords:** Early childhood, Respect for Diversity, The Persona Doll Approach, Validation and Reliability Study, Pre School Teachers Perception of The Persona Dolls Approach Scale , Training in The Persona Doll Approach

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## Introduction

Supporting the acquisition of respect for diversity among individuals is of utmost importance to create social consciousness where by communities can exist in harmony in a spirit of tolerance and free of prejudice. Early childhood is the optimal period for the acquisition of such aptitudes. Early childhood is a time when the child is naturally keen to explore their surroundings and to interact and communicate with those around them. Between the ages of 0-6, children begin to acquire the values, habits and behaviours of their community. This period of development has a life long impact on the individual, which is significant not only for the mental, physical and spiritual well-being of the child but also for their social and emotional development (Ekmişoğlu, 2007).

Individuals begin forming their earliest prejudices as early as the age of two and a half. It is possible to raise tolerant individuals with respect for diversity if these values begin to be taught during early childhood. If children are educated effectively from this early phase in which they begin to develop prejudices, by the time they leave early childhood they will have developed awareness of their own individuality, realised that they are distinct from others and that both they and others possess a variety of distinct personal and psychological attributes. They will understand that gender, social identity and physical attributes may vary among different individuals. The child will have realised that they are part of a family and also of a larger social group, and so will have laid the basis of their cultural identities, languages and attitudes, in addition to their ethnic and cultural entities. The child will have realised that they belong to a social network within a community, within an urban context, which in turn is situated within a broader, state context (Ekmişoğlu, 2007; Divrenği and Aktan, 2010).

Perceptions of the notion of diversity vary in different societies and cultures, so that those who are perceived of as 'different' may, in some cases, be subject to discrimination, may even be dehumanised or punished. In communities where those who are perceived of as 'different' are accepted, such individuals are enabled to become productive members of society (Eryaman, 2006, 2007). Those considered 'different' and labelled as such include the mentally and physically handicapped, those with various chronic physiological ailments or mental disorders, such as the blind or partially sighted, persons from different ethnic groups, or those who are eg. gifted, obese, dwarfed, bespectacled, wear braces or of different skin color.

The primary reference work on respect for diversity is the approach developed by Derman-Sparks and Carol Brunson-Philips at the beginning of the 1980's. The Anti-Bias Curriculum, which focused on the themes of prejudice and discrimination, was first developed in 1989 in the U.S. by the Child Development specialist and educator Louise Derman-Sparks. Her work developed, in collaboration with the ABC Task Force, into a publication (DermanSparks,1989), and as a result of such initiatives, the Anti-bias Curriculum emerged as part of the multicultural education program. It was subsequently confirmed that this program offered teachers the opportunity to reflect on their own prejudices while acting as an effective guide for educators approaching the issue of diversity with children. The programme addressed diversity as variety within the community (Derman-Sparks & Ramsey, 2006).

The anti-bias curriculum is by no means to be considered as a mere adjunct to an existing curriculum program, but as a proactive, activist approach to be integrated within all aspects of curriculum. For it to be effective, the approach necessitates application in every phase of schooling, from the establishment of the basic curriculum framework, though the development of teaching procedures and regulations, to the pragmatic level of how teachers interact with their pupils and the instructional methodologies which they adopt during implementation (Samuels and others, 1996).

Effective programs based on respect for diversity are currently conducted in preschools and primary schools in the United States (Eryaman, 2008). The greatest responsibility in applying such respect for diversity programs falls on the educators, the teachers assuming the role of instructor.

Teachers in the area of early learning bear the critical responsibility of ensuring the growth of respect for diversity along with the individual development of each child. The research of Selma Greenberg (in Sparks 1980) demonstrated the impact of education on the social and intellectual development of children, stressing the critical importance of learning respect for diversity at this age within the framework of individual development.

In order to introduce preschool children to the notion of diversity, to provide them with an enriching experience of the concept and to encourage them to respect differences, in the early 1980's Kay Taus, a preschool teacher in California created dolls with varying physical attributes that represented the diverse cultures within the classroom, She also made complete sets of clothing and wrote stories reflecting the persona of each doll to be shared with the pupils. In 1989, Louise Derman-Sparks and her team in the USA carried on Kay Taus's work, adopting the dolls as an effective tool which could be used to combat all types of prejudice. The dolls were used particularly effectively among children from communities in which there existed severe discrimination. In 2000, such dolls were brought to the United Kingdom by Babette Brown as part of an EU Comenius Project, and training with the dolls ensued, primarily in Germany, but also in a number of other European countries such as Austria and Iceland. The use of the Persona Dolls Approach today is widespread in the USA, UK, Australia and certain European countries such as Denmark, Germany, the Netherlands and Iceland (Smith, 2009; Divrengi and Aktan, 2010).

The Persona Dolls approach has a very positive effect in increasing knowledge and understanding about prejudice among preschool teachers. It helps them to empathise both with children and with their peers and enables them to evolve personal sensitivities and attitudes in addition to effecting how they express their feelings and attitudes. The approach also positively effects teacher self-esteem. Additionally, creating the identities and personal narratives of the dolls serves as a significant opportunity for teachers to cooperate purposefully with families and colleagues.

Global research on the Persona Dolls Approach is limited. Among the more notable studies are those carried out by Glenda MacNaughton (1997), Elaine McClements (2004), Eve Cook (2004), Buchanan (2007), Babette Brown (2008), Nicola Ann Irish (2009), Carol Smith (2009) and Jesuvadian & Wright (2011).

Biersteker and Ngwevela (2002) investigated children's understanding of prejudice using a limited number of Persona Dolls in quad-cultured preschools. The results indicated that the anti-bias approach consolidated pupil and teacher behaviour, helping them to empathise and solve problems. Teachers who received anti-bias training were seen to become more aware of their personal attitudes and more inclined to alter their teaching methods as a result. McClement's research, with interviews, observation and surveys targeting 3-6 year olds and their teachers (2004) focused on the positive impact that Persona Dolls might have on understanding discrimination. The research indicated that the Persona Doll Approach was highly effective working with children. Research by Buchanan (2007) on emotional literacy, using available classroom materials related to emotions and the persona dolls indicated the effectiveness of the approach in specific aspects of all five areas of emotional literacy competence. The study on whether persona dolls were being used in relation to the curriculum topics of equality and discrimination carried out in 2008 by Babette Brown revealed teachers' unwillingness to utilise the approach or to address issues of discrimination in school. The most comprehensive research on the Persona Doll Approach was the doctoral thesis of Carol Smith (2009) based on her work carried out in South Africa. The research included 420 early childhood educators from both rural and urban schools and a variety of socio-economic backgrounds. The efficacy of the Persona Doll approach was measured through teacher surveys, observation, interviews and instructor reports. The research findings indicated that the Persona Dolls Approach was capable of minimalizing discrimination both among teachers and children, and that it also promoted the development of empathy and self-respect.

When the above research is cross-referenced with that of Glenda MacNaughton (1997), Eve Cook (2004), Buchanan (2007), Nicola Ann Irish (2009), Jesuvadian and Wright (2011), we find that studies related to aspects of diversity, prejudice, discrimination and equality yielded similar results.

Concurrent to research being carried out on the Persona Dolls Approach in other countries, the Foundation to Promote Women's Initiatives (KEDV) (2006) project entitled "Erken Çocuklukta Kültürel Çeşitliliğe Saygı Projesi" ("Respect for Cultural Diversity In Early Childhood" Project) was the first Turkish research project completed on this topic. The project's scope was to develop an educational program on respect for diversity and to raise awareness on the matter among parents and teachers working in early childhood education in schools, in order to help children cope with discrimination. The program ran for two years. The principles of the respect for diversity program were included in the National Preschool Education Curriculum in 2006 (MEB, *Ministry of Education*, 2006), which was revised and updated in 2013. Divrenği (2007), in her post-graduate thesis surveyed 685 preschool teachers about the notion of respect for diversity. The research indicated that teachers believed that they were impartial towards individuals of difference and that cultural background or differences in nationality did not factor in their interactions with their pupils. The teachers also believed that schools should provide equal opportunity for all students. This research enabled Divrenği (2007) to develop the "Scale of Respect for Diversity in Early Childhood". The reliability coefficient of this scale was measured as 0.91. The qualitative research of Üner (2011) looked at the effects of Respect for Diversity training, taking 15 preschool teachers' opinions into account. The studies confirmed that the training had a positive effect on all aspects of child development. Additionally the training was found to have enabled the children to develop self-awareness and empathy, an informed respect for diversity and better, more meaningful relationships with individuals dissimilar to themselves.

The first application of the Persona Doll Approach in Turkey was carried out by Aktan Acar and Kamaraj (2006) and aimed at teaching the values of peace to a group of ten children aged 3-6. The later application and research project in which the researcher took part was the Persona Dolls regional project organized within the context of SPO(DPT)-SODES in 2011. The project was carried out over two phases, in partnership with the Boğaziçi University Peace Education Application and Research Center (BEUAM), the Çanakkale 18 Mart University (Çomü) and the Mardin Ortak Kadın İşbirliği Derneği (*Mardin Women's Cooperative Association* (MOKİD)). The first phase included the manufacture of Persona Dolls in the MOKİD workshops, providing employment for women of socio-economically disadvantaged background. Teachers with no previous Persona Dolls experience were selected from schools within and around Mardin, and received initial instruction on the approach during the second phase of research.

In the literature, no previous research had been carried out in Turkey in relation to perceptions of the role of the Persona Doll Approach in introducing the notion of diversity at preschool level, and as a tool enriching the child's daily experience by discouraging or preventing prejudicial behaviour, while also supporting the development of problem solving skills and alternative strategies. Looking at the internationally published work on this subject, while qualitative research is plentiful, validated quantitative studies appear to be lacking. As this is the first academic work of this kind on the Persona Dolls Approach, it is believed that it will fill an important void in the related literature and act as a significant point of reference for future research (Seminar Notes, 2011).

### **Scope of the Study**

The research has two main objectives. The first is to develop the Okul Öncesi Öğretmenlerinin Kimlikli Bebekler Yaklaşımına İlişkin Tutum Ölçeği (*Scale of Preschool Teachers Attitude towards the Persona Dolls Approach*) (OÖÖKBYİTÖ), and complete reliability and validity studies, the second goal is to determine any changes taking place in teacher attitudes towards the approach. To that end, the following questions guided the study:

- 1) Is the pre-school teachers perception of the Persona Dolls Approach scale (OÖÖKBYİTÖ) valid and reliable?

- 2) Did results concerning the attitude of preschool teachers towards the approach vary according to the teacher's place of work, gender, age, number of pupils in class, the presence of children of diversity in class or whether they were previously introduced to the concept or not?
- 3) Did post-test results in the trial group differ in any significant manner from pre-test results?
- 4) Did post-test results in the control group differ in any significant manner from pre-test results?
- 5) Did the post-test results for experimental and control groups show any significant bias in favour of the trial group in terms of changes of attitude towards the Persona Dolls approach?

### **Method**

Both scanning and experimental quantitative research models were employed in this research. In the scanning model, the aim being to seek to portray a situation as it previously existed and continues to do so, within which the subject of the research, whether event, individual or object, is defined as is (Karasar, 2005). Experimental models being based on specific research tools developed by the researcher to determine the relationships between cause and effect through observation. While the focus of the scanning model is to observe a given situation, in the experimental model the researcher seeks to capture data of their own construction through observation (Gökçe, 2004). Varied patterns of research approaches are found in the experimental model. One of these is the pre-test post-test model with trial and control groups. In this model two impartially assigned groups are identified, one as the experimental or trial group, the other as control group. Both groups are subject to (Pre-test) and later Post-test survey applications following the intervention.

#### **The Study Group (Cohort)**

Two separate study groups were used in this research. The first was the cohort selected to participate in the study to develop the scale for validity and reliability, the second was the test-control group chosen to participate in the experimental studies. Individuals were selected for participation in the test through the Purposive Sampling method (Cohen, Monion ve Marrison, 2007). The research cohort was drawn from a pool of individuals who were preschool teachers employed in schools in and around the Turkish cities of Çanakkale and Mardin during the 2011-2012 academic year. The teacher survey and the preschool teachers attitude towards the Persona Dolls Project (OÖÖKBYİTÖ) scale were two of the baseline data acquisition tools employed during this pre-application pilot study, which was conducted before research commenced, and averages were taken of the scale's sub-dimension standard deviations (6.98). The sample size formula was developed on the basis of these deviations (Karasar, 2005). The outcome of the calculations was 187,16.  $N: ((z* ss)/e)^2 = ((1.96*6,98) / 1)^2 = 187,16$ . Based on this, in June 2011, a more accessible cohort of 187 teachers from schools in and around Çanakkale was selected to take part in the study in the first step of research, by the researcher experienced in the Persona Dolls Approach, and focusing on OÖÖKBYİTÖ validity and reliability. The trial group was defined as the scale development group. In September 2011, as part of a DPT- SODES project, 23 preschool teachers from in and around Mardin with no previous knowledge of the Persona Doll Approach were recruited through random sampling to form the trial group in the experimental research model, constituting the second step in the research. Both trial and control group members were teachers selected for purposive sampling according to their level of voluntary participation.

**Table 1.** *Frequency and Distribution Percentage Among the Scale Development Group by Demographic Attributes.*

	F	%
<b>Location of assignment</b>		
City center	45	24,1
Town center	101	54,0
Suburban neighborhoods	20	10,7
Village	21	11,2
<b>School type</b>		
State School	170	90,9
Private School	17	9,1
<b>Gender</b>		
Female	177	94,7
Male	10	5,3
<b>Age</b>		
Ages 21-25	64	34,2
Ages 26-30	65	34,8
Ages 31-35	58	31,0
<b>Education Level</b>		
High school	2	1,1
Associate degree	22	11,8
Bachelors	155	82,9
Higher Degree/doctorate	8	4,3
<b>Characteristics of diversity among children in class</b>		
Handicapped	17	41,5
Immigrant	1	2,4
Different Race	2	4,9
Ethnic minority	3	7,3
Language minority	12	29,3
Combination	6	14,6
<b>PD training uptake</b>		
<b>During education</b>		
Yes	38	20,3
No	149	79,7
<b>During professional career</b>		
Yes	26	13,9
No	160	85,6

The Table indicates that of the teachers taking part in the scale-developing phase of the research, 54,0% were employed in suburban neighbourhoods, 24,1% in urban centers, 11,2% in villages and 10,7% in towns. 90,9% of the subjects were employed in state schools while 9,1% were employed in private schools. 94,7% of the teachers were female while 5,3% were male. 34,8% of the teachers were between the ages 26-30, 34,2% between 21-25, and 31,0% were between the ages of 31-35. 82,9% were graduates of a preschool teaching faculty, 11,8% held associate degrees in child development and education, 4,4% held a higher degree/doctorate and 1,1% were graduates of a girls vocational high school child development program. 43,0% of teachers participating in the first phase of research have pupils of diversity in their classes. 41,5% of these are disabled, 29,3% are language minorities, 7,3% are ethnic minorities, 4,9% are of a different race, 2,4% are immigrants and 14,6% are a combination of the above. 20,3% of the teachers taking part in the scale development work were trained in the Persona Dolls Approach during the course of their education, 13,9% were trained during their professional careers.

**Table 2.** *Frequency and Distribution Percentage Among Trial and Control Group by Demographic Attributes.*

	Trial Group		Control Group	
	F	%	F	%
<b>Location of duty</b>				
City Center	2	8,7	6	26,1
Town center	20	87,0	14	60,9
Suburban neighborhoods	1	4,3	3	13,0
Village	0	,0	0	,0
<b>School type</b>				
State School	23	100,0	23	100,0
Private School	0	,0	0	,0
<b>Gender</b>				
Female	20	87,0	20	87,0
Male	3	13,0	3	13,0
<b>Age</b>				
Ages 21-25	5	21,7	5	21,7
Ages 26-30	13	56,5	12	52,2
Ages 31-35	5	21,7	6	26,1
<b>Education Level</b>				
High school	0	,0	0	,0
associate degree	0	,0	1	4,3
Bachelors	23	100,0	22	95,7
Higher Degree/doctorate	0	,0	0	,0
<b>Characteristics of diversity among children in class</b>				
Handicapped	1	20,0	4	36,4
Immigrant	0	,0	0	,0
Different Race	0	,0	0	,0
Ethnic minority	0	,0	1	9,1
Language minority	2	40,0	5	45,5
Combination	2	40,0	1	9,1
<b>PB training uptake</b>				
<b>During education</b>				
Yes	1	4,3	0	,0
No	22	95,7	23	100,0
<b>During professional career</b>				
Yes	0	,0	0	,0
No	23	100,0	23	100,0

Table 2 indicates that 8,7% of the teachers in the trial group worked in central urban schools, 87% in suburban neighbourhoods and 4,3% in towns. 26,1% of teachers from the control group worked in central urban schools, 60,9% in town center schools and 13% in suburban neighbourhoods. All the teachers forming the test and control groups are employed in state schools. 87% of the teachers were female, 3% were male. 21,7% of the trial group teachers were between 21-25, 56,5% were between 26-30 and 21,7% between 31-35. The control group age distribution was: 21,7% between 21-25, 52,2% between ages 26-30 and 26,1% between ages 31-35. All teachers in the trial group held degrees in preschool teaching. 4,3% of the control group teachers held an associate degree on child development and education, 95,7% held preschool teaching degrees. The trial and control groups do not include teachers with higher degrees. 21,7% of the class populations consisted of students of diversity in the trial group teachers' classes, of which 40% are language minorities, 40% present a combination of attributes and 20% are disabled. Of the 47,8% of students of diversity in the control group teachers' classes, 45,5% are language minorities, 9,1% present a combination of

attributes and 36,4% are disabled. Only 4,3% of the trial group received any formal training in the Persona Doll Approach during their studies or professional careers. The remaining values of the trial and control groups amount to 0%.

### **Methods of Data Gathering**

Two data acquisition methods were used to gather the research data. The first was the Teacher Survey developed by the researcher to identify the demographics of the preschool teachers, the second was the Preschool Teachers Attitude Towards the Persona Dolls Approach Scale (OÖÖKBYİTÖ) which was developed and tested for validity-reliability in the context of this research.

*Teacher Survey:* The initial measurement tool used within the research was a survey designed by the researcher to evaluate teacher demographics and opinions on the Persona Dolls. The survey tool was a questionnaire consisting of 18 items. Thirteen of the multi-choice questions focus on teacher demographics including the location of the teacher's school, the type of school, the institution to which the school is affiliated, teacher gender, age, level of education, number of years in active teaching, age group of pupils taught, number of pupils in class and their profiles. Five of the questions are intended to test teacher pre-knowledge concerning the Persona Doll Approach. Once the teacher survey was prepared, it was reviewed by five academic specialists and checked by three preschool teachers. The recommended changes were applied as necessary to finalize the survey. The survey takes approximately 5 minutes to complete.

*The Preschool Teachers' Perception of the Persona Dolls Approach Measure (OÖÖKBYİTÖ):* The Measure, as its name suggests, is intended to measure teacher attitude towards the Persona Doll Approach and the topic of respect for diversity. Teachers were asked to answer all sub-dimensions of the test according to their personal points of view and attitudes. The measure contains five sub-dimensions in total. The first factor consists of ten steps; the second, thirteen; the third, twelve; the fourth, six; and the fifth 7 steps, making a total of 48 in all. The sub-dimensions of the scale are: the objectives of the Persona Doll Approach, teacher perception of the approach, children's attitude towards respect for diversity and prejudices, children's attitudes towards their feelings, and teacher understanding of self-competence. OÖÖKBYİTÖ employs a five-point likert scale consisting of the following options: Strongly agree, Agree, Undecided, Disagree, Strongly disagree. The teachers are asked to select the item that most reflects their opinion. Twenty-seven of the listed items on the scale reflect positive perceptions and attitudes, one point reflects the contrary. Rather than using the final score, it is important to take the median of the final average into account. All the results are evaluated between 0 and 5. The main criteria in this assessment are determined by dividing the number of options minus 1 with the number of criteria (Tavşancıl, 2010). Using the value  $4/5=0.8$  as base, the total and sub-dimension assessment measures were estimated as follows: 1.8 very low attitude, 1.9-2.7 low attitude, 2.8-3.6 average, 3.7-4.5 high attitude, 4.6-5.0 very high attitude. This scale takes approximately fifteen minutes to complete.

### **Data Analysis**

The data garnered from the Teacher Questionnaire completed at the onset of the research was scanned for frequency and percentage distribution, which is represented below in table format.

To apply the necessary tests for validity at the onset, the scale was reviewed by five academic specialists for scope. Structural validity was determined using factor analysis with the varimax rotated technique, a method within the expander factor analysis approach, the sub-dimensions of the scale being thus determined. Also various hypothesis tests were carried out to test the structural validity of the scale based on median values of total and sub-dimensional data within OÖÖKBYİTÖ in the context of Teacher Survey data.

A reliability scaling is aimed for the second phase. The first step in determining test reliability is to assess test-retest reliability. The preliminary and final test results obtained from the 30 preschool teachers previously instructed in the Persona Doll Approach were analysed with the Pearson product-



moment correlation coefficient. The internal consistency of the test was determined by Cronbach's alpha operations that rely on the variance of each test item.

Based on the article analysis work, the total and sub-dimension distribution of points for the OÖÖKBYİTÖ was found to be within normal values. According to independent variables, it was decided to use parametrical statistic techniques in the hypothesis tests to determine the total and sub-dimension OÖÖKBYİTÖ averages. The independent sample test is done in situations where the independent variables are grouped in twos; One-way Analysis of Variance (ANOVA) is implemented when three or more categories are formed. Within the ANOVA procedure; the Scheffe test is used as a Post-Hoc technique while for descriptive statistical values, the Levene test, the Eta square values, in situations where meaningful differences can be seen in the "F" test and when the variances of the Levene test are homogeneous ( $p < .05$ ); The Tamhane Test is used instead, Post-Hoc when the variances are heterogeneous ( $p < .05$ ). All results alligned with the scope of the research are double-checked and the significance level has been determined as 0.05.

Data from the experimental study carried out as the second phase of research

GD - T1 – Independent Variable – T2

GK- T1-T2- measured results based on this model are analysed according to the research hypotheses, enabling statistical conclusions to be reached. The randomly selected teacher experimental and control groups were instructed within OÖÖKBYİTÖ before their training in the Persona Dolls Approach. The Shapiro-Wilkstests were used to test the sub-dimension and aggregate scales, as the trial groups contained less than 30 individuals. The Shapiro-Wilks test results proved inconsequential, distribution being therefore deemed normal, hence parametrical techniques were selected for analysis. Independent samples were taken from both experimental and control groups of teachers to equalize the OÖÖKBYİTÖ preliminary test results; Dependent group testing was completed to analyse the variations between pre and post-tests. In this phase of research, the results were tested one way and their significance levels were taken as 0.05 minimum.

The statistical calculations within this research were carried out using the SPSS program.

## Findings

### Findings on Content/ Scope Validity of OÖÖKBYİTÖ

Local and international resources were investigated before developing the OÖÖKBYİTÖ. Mainly the focus was on the scanning of international literature as local sources on the subject remain limited. Characteristics of the sixty-four point Persona Doll Approach were determined from the data acquired from this research. A set of sixty-four questions were developed in a five scale Likert format according to these characteristics. The preliminary scale developed from this set of questions was reviewed by five academics familiar with the Personal Dolls Approach and possessing expertise in the area of content validity, whose opinions were sought. Forty-eight steps unilaterally agreed upon by the academics were introduced to the scale. The revised scale was then handed over to a Turkish linguist for content correction. The prepared scale was then experimentally applied with a cohort of 30 teachers at weekly intervals, to ensure a lack of cognitive or language issues. This determined the final form of the scale.

By seeking feedback from academic expertise during the process of developing the scale OÖÖKBYİTÖ, the content validity of the tool was effectively addressed. The experts, while reviewing each step within the context of the scale, also took into account any omitted characteristics or steps, which assessment data was included in their form reports. As a result of the expert assessment review of OÖÖKBYİTÖ, sixteen points were removed from the scale, and no new additions were made.

Another way of validating the scope of the test is by analysing the strength of differentiation yielded within the test. The step differentiation article values are obtained by comparing the points

received by individuals in the upper and lower quartile frames (27%) with the Independent Group T Test (Büyüköztürk, 2010). The objective is to determine whether the answer to the question varies in a meaningful way between the upper and lower groups and thus assess its effectiveness in differentiation. An independent sampling group test was used to determine any significant differentiation in the step and overall points between the upper and lower 27 percentile groups. The Pearson analysis done to determine whether each step of the scale was in appropriate relation to the overall points, revealed significant correlation between the steps and the points ( $P < .001$ ), while independent sample testing carried out to determine differentiation between the upper and lower groups was satisfactory in determining the distinction of each step (at least  $p < .01$ ). The results verify the high validity of the test in terms of scope.

### Findings Related to The Structural Validity of OÖÖKBYİTÖ

Factor analysis is the most important step in determining the structural integrity of a test. The objective of factor analysis is to express a high number of articles with fewer factors. The first step in determining the factor structure of OÖÖKBYİTÖ is to carry out an untransformed basic components analysis. The Varimax Rotation and Kaiser Normalizing techniques are used to name and analyse the uncovered factors.

The expanding factor analysis uncovers the Kaiser-Meyer-Olkin value first. Scientifically, a Kaiser-Meyer-Olkin value of over 50 signifies the sample size of the assessed scale to be sufficient for factor analysis (Tavşancıl, 2010). As seen in table 3, the Kaiser-Meyer-Olkin value of the scale factor is 0.812. Based on the result, the sample size was deemed adequate for research. The Barlett Test resulted in a 0.001 statistical result, strengthening the scaled characteristics' attributes as a multi-dimensional feature. The Kaiser-Meyer-Olkin and Barlett test results indicate the expander factor analyses to be statistically interpretable.

**Table 3.** *KMO and Barlett's Test Values of OÖÖKBYİTÖ.*

Kaiser-Meyer-Olkin Sample Adequacy		,812
Barlett Test of Sphericity	Ki-Square Value	5254,432
	sd	1225
	p	,000***

\*\*\* $p < .001$

Factor analysis is carried out using two separate techniques. If the researcher has written the steps before analysing the sub-dimensions, the factor analysis Eigen values must be realised as 1 and above. The researcher is however expected to determine the sub-dimensions and complete the factor analysis according to the determined number of factors revealed. Five sub-dimensions of the OÖÖKBYİTÖ were first established for this research, and analysis operations were carried out on these five factors. The Eigen values of the five sub-dimensions resulted in values over 1,00 (minimum 2,658) in factor analyses realised with the Kaiser Normalizing and the Varimax Perpendicular Turning Methods. The total variance in the five factors measures 46,438 %. The variance amounts are 14,213% for the first, 10,628% for the second, 9,572% for the third, 6,708% for the fourth and 5,317% for the fifth factors. In a test with structural validity, the total variance of all sub-dimensions must be above 40% (Büyüköztürk, 2010; Tavşancıl, 2005). The OÖÖKBYİTÖ sub-dimensions resulted in a variance of 46,438%, thus confirming the high structural validity of the test.

**Table 4.** *Expander Factor Analysis Results for OÖÖKBYİTÖ.*

Factor	Eigen Value	The stated Variance Percentage	Total Percentage
1	7,107	14,213	14,213
2	5,314	10,628	24,842
3	4,786	9,572	34,413
4	3,354	6,708	41,121
5	2,658	5,317	46,438

For an article to be included in a factor, its significance within that factor must be above 0.30' (Büyüköztürk, 2010). Analysis based on this assumption revealed that sixteen articles were found to have significance value of below 0.30 in all five factors. This led to their removal from the scale. Table 5 displays the factor significance of the remaining forty-six articles. This solution presents a weighted value of 0.30 and above for all articles.

**Table 5.** *Factor Coefficients of Points Pertaining to OÖÖKBYİTÖ.*

Articles	Factors				
	1	2	3	4	5
27	,902				
26	,878				
25	,848				
28	,826				
24	,720				
35	,709				
41	,703				
32	,561				
23	,511				
29	,374				
38		,776			
37		,757			
34		,738			
33		,728			
39		,684			
30		,564			
31		,496			
40		,471			
36		,471			
42		,438			
44		,312			
14		,308			
15		,305			
11			,788		
12			,764		
13			,756		
21			,588		
17			,556		
1			,543		
18			,478		
22			,471		
3			,445		
4			,427		
2			,367		
9			,367		
5				,719	
6				,714	
7				,695	
8				,546	
16				,497	

19	,346	
10		,692
45		,572
20		,505
43		,355
47		,353
46		,311
48		,307

Factor 1; Consisted of ten articles, this factor is cited as appropriate to the said articles in relation to the " Objectives of the Persona Doll Approach". Factor 2; Consisted of thirteen articles, related to "Teacher Perception of The Persona Dolls Approach". The twelve-item sub-dimension entitled "Children's Perceptions of Prejudice and Respect for Diversity" is the third factor. Factor 4 is the six-step sub-dimension entitled "Children's Attitudes Towards Feelings". The fifth factor is entitled "Teacher Perceptions of Proficiency" and contains seven items.

Another method for determining the structural validity of a scale is by calculating the correlation between the sub-dimension points in question and the test aggregate points calculated for expander factor analysis. The relations between the total and sub-dimensions of the OÖÖKBYİTÖ are displayed in Table 6.

**Table 6.** Relationship Between Total and Sub-dimensional OÖÖKBYİTÖ Points

n:187	Total	Fac.1	Fac.2	Fac.3	Fac.4	Fac.5
Total	1	,754(***)	,726(***)	,605(***)	,701(***)	,703(***)
Fac.1		1	,486(***)	,231(***)	,386(***)	,478(*)
Fac.2			1	,271(***)	,330(***)	,413(***)
Fac.3				1	,394(***)	,218(**)
Fac.4					1	,385(***)
Fak.5						1

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

In a valid test, the correlations between total points of the sub-dimensions must be statistically meaningful, with high levels of correlation between them (Tavşancıl, 2010). The correlation of the OÖÖKBYİTÖ total points and sub-dimensions was at the highest level for the 1st factor (0.75). The lowest correlation was revealed for the 3rd factor at (0.61).The total points for all dimensions and their correlations are statistically meaningful at the 0.001 level. In a validated test, a medial level of correlation between sub-dimensions indicates that the test may yield statistically meaningful results. The highest correlation coefficient among the OÖÖKBYİTÖ sub-dimensions is between Factors 1 and 2 and is valued at 0.49. This result is statistically relevant to the 0.001 level. The lowest correlation coefficient is found between Factors 3 and 5 (0.22). This result is statistically significant at the 0.01 level.

Additionally, hypothesis tests were carried out during the structural validity control of the scale based on the median values of the complete and sub-dimension OÖÖKBYİTÖ data. The first step involved testing the total and sub-dimension distribution normality of the OÖÖKBYİTÖ.

**Table 7.** Results of the Kolmogorov-Smirnov Test Conducted to Review Total and Sub-dimension Points Distribution of OÖÖKBYİTÖ

	fac1	fac2	fac3	fac4	fac5	Total
N	187	187	187	187	187	187
Kolmogorov-Smirnov	1,751	,802	1,481	1,680	1,358	,432
Z						
p	,104	,541	,055	,057	,051	,992

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$

None of the "z" values of the Kolmogorov-Smirnov test applied to the OÖÖKBYİTÖ total and sub-dimensions are statistically significant. Results indicate the points distribution of OÖÖKBYİTÖ total and sub-dimensions as normal, parametrical statistical techniques were used to determine the differences between the OÖÖKBYİTÖ total and sub-dimension point aggregates.

**Table 8.** *The One Way Variance Analysis Result of OÖÖKBYİTÖ Total and Sub-dimension Points According to the Place of Employment Variable.*

Scales	Source of Variance Source	Squares of Aggregate	sd	Squares Average	F	p
Fac.1	Inter Group	3,838	3	1,279	4,484	,005*
	Within Group	52,202	183	,285		
	Total	56,039	186			
Fac.2	Inter Group	,836	3	,279	1,023	,384
	Within Group	49,866	183	,272		
	Total	50,702	186			
Fac.3	Inter Group	,262	3	,087	,336	,799
	Within Group	47,545	183	,260		
	Total	47,807	186			
Fac.4	Inter Group	,374	3	,125	,573	,633
	Within Group	39,758	183	,217		
	Total	40,132	186			
Fac.5	Inter Group	,109	3	,036	,167	,918
	Within Group	39,843	183	,218		
	Total	39,952	186			
Total	Inter Group	,359	3	,120	,977	,405
	Within Group	22,452	183	,123		
	Total	22,812	186			

\* $p < ,05$  \*\* $p < ,01$  \*\*\* $p < ,001$

Table 8 displays the one-way variance analysis according to the place of work variable applied to the OÖÖKBYİTÖ total and subgroup points. Only the "Objectives of the Persona Dolls Approach" subgroup displayed any meaningful statistical result at the 0.01 level. As the teacher's place of work diversifies, their attitude towards "the objectives of The Persona Dolls Approach" begins to differ. Since in the variance analysis of "the Objectives of The Persona Dolls Approach" sub-dimension, significant distinctions were found; the Scheffe Test was conducted to find the variant root groups as no significant distinction was observed between variances at that level. The Scheffe test concluded the OÖÖKBYİTÖ sub-dimension points on "the objectives of The Persona Dolls Approach" of the teachers working in villages to be significantly more positive than their colleagues working in towns.

**Table 9.** *Results of the Mann-Whitney U test on the Gender Variables Within the OÖÖKBYİTÖ Total and Sub-dimension Points.*

Sub Dimension	Gender	N	Row Average	Row Sum	U	z	p
Grand Total	Female	177	96,10	17010,50	512,500	-2,237	,025*
	Male	10	56,75	567,50			

\* $p < ,05$  \*\* $p < ,01$  \*\*\* $p < ,001$

Table 9 displays the results of the non-parametric Mann-Whitney U test on the OÖÖKBYİTÖ total and sub-dimension points according to the scale development group gender variable. Women

score N=177 and men score N=10 in the gender variable. N=10 causes distribution to drop below 30, leading to a deviance from norm. Thus, the non-parametric unbounded Mann-Whitney U test was conducted rather than the parametric unbounded U test. According to the analysis carried out, all sub-dimensions except Factors 2,3 and 4 displayed a significant statistical discrepancy of at least 0.05 between the scale total and average points. All these differences were in favour of female preschool teachers. The female teachers scale points on „Objectives of the Persona Dolls" ( $p<.01$ ), the "Teachers Perception of Proficiency" ( $p<.05$ ) and their attitude on the general level ( $p<.05$ ) was significantly more positive than in their male counterparts.

**Table 10.** Results of the OÖÖKBYİTÖ One Way Variance Analysis of the Total and Sub-dimension Points Based on the Age Variable.

Scales	Source of Variance Source	Squares of Aggregate	sd	Squares Average	F	p
Fac.1	Inter Group	2,394	2	1,197	4,106	,018*
	Within Group	53,645	184	,292		
	Total	56,039	186			
Fac.2	Inter Group	1,509	2	,754	2,822	,062
	Within Group	49,194	184	,267		
	Total	50,702	186			
Fac.3	Inter Group	,031	2	,016	,060	,942
	Within Group	47,776	184	,260		
	Total	47,807	186			
Fac.4	Inter Group	,066	2	,033	,151	,860
	Within Group	40,066	184	,218		
	Total	40,132	186			
Fac.5	Inter Group	,904	2	,452	2,129	,122
	Within Group	39,049	184	,212		
	Total	39,952	186			
Total	Inter Group	,585	2	,293	2,423	,091
	Within Group	22,226	184	,121		
	Total	22,812	186			

Table 10 displays the only statistically significant result obtained from the one way variance analysis of the age variable among preschool teachers taking part in the scale development work. This was in the OÖÖKBYİTÖ "Objectives of The Persona Dolls Approach" subgroup total with subgroup point significance of 0.05. As teacher ages diversify, their attitude towards the "Objectives of The Persona Dolls Approach" also diversify. As significant distinction in the variance analysis of the "Objectives of The Persona Dolls Approach" sub-dimension was found; the Scheffe Test was conducted to find the variant root groups as no significant distinction was observed between the variances at this level. The Scheffe Test resulted in significantly higher positive results for the 21-25 age group compared with the 26-30 group in the OÖÖKBYİTÖ "Objectives of The Persona Dolls Approach" sub-dimension points.

**Table 11.** The Relationship Between the Number of Students in Class and the OÖÖKBYİTÖ Total and Sub-dimension Points.

Factors	Number of Students
fac1	-,106
fac2	-,149(*)
fac3	-,056
fac4	-,063
fac5	-,057

Total	-,126
<i>*p&lt;,05</i> <i>**p&lt;,01</i> <i>***p&lt;,001</i>	

Table 11 shows the variable correlation of classroom size and the relationship coefficient between the OÖÖKBYİTÖ total and sub-dimension points. A 0.05 negative correlation was revealed between classroom size and the OÖÖKBYİTÖ sub-dimension of "Teacher Perception of the Persona Dolls Approach". As student numbers in classes dropped, teacher perception of the Persona Dolls Approach improved inversely.

**Table 12.** *Independent Sample Group Test Results of the OÖÖKBYİTÖ Total and Sub-dimension Points According to the Existence of Children of Diversity.*

Scale	Presence of student with diverse attributes	N	Exp. Av.	Std. Variation	Std. Error	t	sd	p
Total	Yes	43	3,9294	,36074	,05501	-1,885	185	,061
	No	144	4,0434	,34394	,02866			

*\*p<,05   \*\*p<,01   \*\*\*p<,001*

Table 12 shows the results of the OÖÖKBYİTÖ total and sub-dimension test executed with the scale development group, according to the presence of diverse pupils in class. The analysis only lead to a 0.05 level of meaningful discrepancy in factor 5 (The teachers perception of proficiency). The discrepancy was in favour of teachers lacking diversity among pupils in class. Teachers lacking diversity among pupils in their classes perceive themselves as more competent regarding the Persona Dolls Approach. The OÖÖKBYİTÖ total and sub-dimension points of teachers with pupils of diverse backgrounds differentiate according to the specificities of the diversity.

**Table 13.** *Results of the OÖÖKBYİTÖ Total and Sub-dimension Independent Samples Test on "Attitudes to the Persona Dolls Approach" According to the Receipt of Training as Student or Professional*

Scale	Trained in persona dolls during education.	N	Exp. Av.	Std. Variation	Std. Error	t	sd	p
Total	Yes	38	4,2696	,35023	,05681	5,292	184	,000***
	No	148	3,9548	,32105	,02639			
	Trained in persona dolls during professional career.							
Total	Yes	26	4,2417	,36931	,07243	3,607	184	,000***
	No	160	3,9829	,33439	,02644			

*\*p<,05   \*\*p<,01   \*\*\*p<,001*

The results of the Independent Samples Test based on whether the trial group teachers received training in the "Persona Dolls Approach" as students or as professionals for the OÖÖKBYİTÖ total and sub-dimension points is displayed in Table 10. All subgroups with the exception of Factor 3 (The Children's Attitude on Prejudices and Respect of Diversity) led to a minimal distinction of 0.01. The teachers who received training in the "Persona Dolls Approach" had a significantly more positive outlook on the project than those who had not. Table 13 displays the results of the OÖÖKBYİTÖ total and sub-dimension independent sample tests conducted according to whether the teachers of the sample development group are trained in the "Persona Doll Approach". The analysis concluded that except Factor 3 (The Children's Attitude Towards Diversity and Prejudice) and Factor 4 (Children's Attitude to Emotions) all sub-dimensions and scale aggregates displayed a minimum significant variance of 0.05. The teachers who received training in the Persona Dolls approach were discovered to have a significantly more positive approach compared to those who lacked said training.

The results obtained are important evidential factors verifying the structure of the scale.

**Findings on the Test-Repeat Test Reliability of OÖÖKBYİTÖ.**

The scale test was conducted twice with a group of 30 preschool teachers with prior knowledge of the Persona Dolls Approach over a weekly interval to determine the test - re test reliability of the questionnaire. The Pearson product-moment correlation coefficient analysis method was applied between both pre and post-test results for this purpose. Table 14 displays the OÖÖKBYİTÖ total and sub-dimension reliability coefficients for both test and re-test. The Pearson product-moment correlation coefficient analysis revealed a significant statistical relationship between both OÖÖKBYİTÖ total and each of the sub-dimension test values. This confirms OÖÖKBYİTÖ test re test reliability.

**Table 14.** Reliability Coefficients of the Total and Sub-dimension OÖÖKBYİTÖ Test - Repeat Tests.

Scale	n	r	p
Objectives of the Persona Doll Approach	30	,842	,000***
Teachers' Perception of the Persona Dolls Approach	30	,783	,000***
Children's Attitude towards Diversity, Respect and Prejudice	30	,676	,000***
Children's Attitude Towards Emotions	30	,654	,000***
Teachers' Perception of Proficiency	30	,613	,000***
Total	30	,781	,000***

\* $p < ,05$     \*\* $p < ,01$     \*\*\* $p < ,001$

The highest result among the test – re-test reliability coefficients was from the first sub-dimension (Objectives of the Persona Doll Approach). The lowest coefficient of 613 belongs to the fifth sub-dimension (The Teachers' perception of Proficiency).

**Findings Regarding the Internal Consistency Reliability of OÖÖKBYİTÖ.**

The internal consistency of OÖÖKBYİTÖ at both total and sub-dimension levels was determined with Cronbach's Alpha Process for each step. The internal consistency coefficients are shown in Table 15.

**Table 15.** Coefficients of the Total and Sub-dimensional Levels of OÖÖKBYİTÖ

Scale	n	Cronbachalfa	p
Objectives of the Persona Dolls Approach	187	,924	,000***
Teachers' Perception of the Persona Dolls Approach	187	,847	,000***
Children's Attitude Towards Diversity, Respect and Prejudice	187	,817	,000***
Children's Attitude Towards Emotions	187	,753	,000***
Teachers' Perception of Proficiency	187	,579	,000***
Total	187	,916	,000***

\* $p < ,05$     \*\* $p < ,01$     \*\*\* $p < ,001$

The total points for the OÖÖKBYİTÖ internal consistency coefficient were calculated as 0.916. The result obtained was close to +1,00 indicating a considerably high value for the general internal reliability of the test. The highest internal consistency coefficient among the scale sub-dimensions was revealed in relation to the "Objectives of the Persona Doll Approach" sub-dimension. The lowest internal consistency coefficient is 0.579 and refers to the "Teachers' Perception of Proficiency" sub-dimension. The median of all internal consistencies is 0.806. These results indicate a high reliability for OÖÖKBYİTÖ total and sub-dimension internal consistencies.



### Experimental Study Findings

In the second step of the research, the cohort from the pre test-last test control groups were equalized taking into account the results from the teacher survey form which was validity-reliability tested in the first phase of research and the OÖÖKBYİTÖ results. Parametric techniques were used in the analysis of data. Information related to the groups is shown in Table 16.

**Table 16.** *The Frequency and Percentage Distribution of Trial Group Teachers According to Their Knowledge Level of the Persona Doll Approach.*

<b>Trained in the Persona Doll Approach During Professional Career</b>					
		<b>Yes</b>	<b>No</b>		<b>Total</b>
Test Group	F	0	23		23
	%	0	100,0		100,0
Control Group	F	0	23		23
	%	0	100,0		100,0

  

<b>Knowledge Level Regarding The Persona Doll Approach</b>						
		<b>High</b>	<b>Medium</b>	<b>Low</b>	<b>None</b>	<b>Total</b>
Test Group	F	0	0	5	18	23
	%	0	0	21,7	78,3	100,0
Control Group	F	0	0	0	23	23
	%	0	0	0	100,0	100,0

Table 16 shows that non of the teachers had been trained in the Persona Doll Approach during their professional careers. 21,7% of the teachers forming the control group had "low" knowledge of the Persona Doll Approach. 78,3% had no knowledge whatsoever. None of the control group teachers were knowledgeable about the "Persona Doll Approach".

The third question of the research; "Has the attitude of the control group shifted in any significant way between the two tests?" was answered by reapplying the OÖÖKBYİTÖ after a two day Persona Doll Approach training. An Associative Group test was applied to test the variances between the scale total and sub-dimensional points between the trial groups pre and post tests. The results are given in Table 17.

**Table 17.** *The Total and Sub-dimension Points of the Trial Group OÖÖKBYİTÖ Preliminary and Sub- dimension T Test Results:*

Scale	Exp. Av.	N	Std. Deviation	r	t	sd	p
Pre Fac.1	3,2319	23	,26939	-,031	-10,246	22	,000***
Last Fac.1	4,5036	23	,52252				
Pre Fac.2	3,7425	23	,54026	,287	-4,037	22	,001***
Last Fac.2	4,2375	23	,43447				
Pre Fac.3	4,0978	23	,46442	,812***	-1,182	22	,250
Last Fac.3	4,1667	23	,44381				
Pre Fac.4	4,5362	23	,39872	,743***	-,299	22	,768
Last Fac.4	4,5580	23	,52129				
Pre Fac.5	3,9379	23	,46953	,574**	-3,120	22	,005**
Last Fac.5	4,2174	23	,46164				
Pre Total	3,9093	23	,27147	,719***	-7,084	22	,000***
Final Sum	4,3366	23	,41431				

\* $p < ,05$     \*\* $p < ,01$     \*\*\* $p < ,001$

According to the findings displayed in table 17, in the Associative Group test applied to assess the total and sub-dimension variations between the preliminary and final tests in the trial group, all sub-dimensions and the test's total average, excepting Factors 3 and 4, displayed significant variances at a minimum of 0.01. The differences were in favour of the post-test. The post-test of the trial group marked increases in the teachers' positive perceptions of the Persona Doll Approach and their perceptions of proficiency sub-dimensions. However, the preliminary and final tests did not display any significant variances between the two tests on the "attitudes of children towards prejudice and the concept of respect of diversity" and "the children's attitude towards feelings". Significant differences prove the Persona Dolls trial group was impacted in a positive manner by the Persona Doll training.

The fourth research question "Does the trial group's attitude in the post test differ from that of the preliminary test?" led to conducting an Associative Group test on the control group after a two day Persona Doll Approach and OÖÖKBYİTÖ training.

**Table 18.** *The Results of the OÖÖKBYİTÖ Total and Sub-dimension Associative Group Tests*

Scale	Exp. Av.	N	Std. Deviation	r	t	sd	p
Pre Fac.1	3,1541	23	,14879	,542**	-2,023	22	,055
Post Fac.1	3,2738	23	,33535				
Pre Fac.2	3,4993	23	,29993	,683***	1,415	22	,171
Post Fac.2	3,4231	23	,34116				
Pre Fac.3	3,9384	23	,30019	,163	,587	22	,563
Post Fac.3	3,8862	23	,35585				
Pre Fac.4	4,5238	23	,30560	,191	2,772	22	,011*
Last Fac.4	4,2768	23	,36253				
Pre Fac.5	3,7647	23	,30847	,313	-,938	22	,359
Last Fac.5	3,8357	23	,31042				
Pre Total	3,7478	23	,28143	,481*	-,504	22	,620
Final Sum	3,7768	23	,25955				

\* $p < ,05$     \*\* $p < ,01$     \*\*\* $p < ,001$

The data presented in table 18 shows the Associative Group tests analysing the difference between the control group pre and post-tests; These uncovered no statistically significant test totals or sub-dimension data with the exception of factor 4. "The children's attitude towards emotions", as measured in the second test, fell sharply in contrast to the first. The control group attitude towards the "Persona Doll Approach" remained similar in both tests.

The final question, defined as: " In the post test, between the experimental and control groups is any significant improvement demonstrated in favour of the trial group with respect to attitude to the Persona Dolls Approach?" aims to determine the effect of the Persona Doll Approach training on the trial group. To that purpose, the total and sub-dimension points of the post test in relation to both trial and control groups were assessed via independent test sampling with the findings shown in Table 19.

**Table 19.** Results of the Independent Sample Test on the OÖÖKBYİTÖ Total and Sub-dimension Points of the Trial and Control Groups

Scale	Group	N	Exp. Av.	Std. Deviation	Std. Error	t	sd	p
sfac1	Test Group	23	4,5036	,52252 ,33535	,10895 ,06992	9,500	44	,000***
	Control Group	23	3,2738					
sfac2	Test Group	23	4,2375	,43447 ,34116	,09059 ,07114	7,070	44	,000***
	Control Group	23	3,4231					
sfac3	Test Group	23	4,1667	,44381 ,35585	,09254 ,07420	2,364	44	,023*
	Control Group	23	3,8862					
sfac4	Test Group	23	4,5580	,52129 ,36253	,10870 ,07559	2,124	44	,039*
	Control Group	23	4,2768					
sfac5	Test Group	23	4,2174	,46164 ,31042	,09626 ,06473	3,291	44	,002**
	Control Group	23	3,8357					
S. Total	Test Group	23	4,3366	,41431 ,25955	,08639 ,05412	5,492	44	,000***
	Control Group	23	3,7768					

\* $p < ,05$  \*\* $p < ,01$  \*\*\* $p < ,001$

The trial and control groups post test OÖÖKBYİTÖ total and sub-dimension point averages displayed a minimum significant variance of 0.05. The variances were all in favour of the trial group. Following training in the Persona Dolls Approach, the trial group's attitude was improved significantly positive in comparison to that of the control group.

### Discussion, Conclusions and Recommendations

The main focus of the research was to develop a scale, measuring attitude to the Persona Doll Approach and to determine the validity and reliability of the tool. The second objective was to determine the effectiveness of the approach by observing whether a change in attitude had occurred among the 23 preschool teacher trial group cohort which took part in Persona Dolls Approach training. The scale developed following step 1 of the research presented factor values between 0.902 - 0.305 for the 48 sub-dimension steps assigned to the five factors. The test-re test reliability coefficients of the scale vary between 0.613 and 0.842. The internal consistency coefficients of the scale vary between 0.924 and 0.579 (Cronbachalfa). Ultimately, the psychometric attributes of the scale were deemed sufficient. Following the hypothesis tests, whether the attitudes towards Persona Dolls differed according to variables such as teacher gender, classroom size, presence of pupils of diversity or being educated on the subject was also researched. The experimental work forming the second step of the research displayed the trial group teacher attitude towards the Persona Doll Approach to have improved significantly when compared with the preliminary test.

As no previous Turkish research on the Persona Doll Approach exists, the results will be evaluated internally and referenced with the appropriate overseas literature. The availability of only qualitative previous research on the matter could be considered a limitation.

When the first step of the research, the scale development work was analysed, the teachers who received training in the Persona Dolls Approach were found to have a significantly more positive approach compared to those who lacked any training. Education in the Persona Dolls Approach is an important influence on the attitude of teachers. Research conducted by Biersteker and Ngwevela (2002) of South Africa, demonstrated changes in the personal attitudes of teachers who took the training, and also changes to their teaching practices. Another study undertaken by Elaine McClements (2004) indicated that half of the participant teachers felt that the Persona Doll Approach had been very useful in their teaching of children, while certain difficulties attached to the approach cited by the teachers in their reports were attributed to insufficient training. According to the findings of McClemen's research, the Persona Doll Training was influential on teacher attitude.

Another result of the scale development phase was the demonstration of how, as student numbers in classes dropped, teacher perception of the Persona Dolls Approach improved inversely. The teachers believed that the Persona Dolls Approach would be more successful in less crowded classes. Eve Cook's (2004) research in the U.K. arrived at similar conclusions as to how the Persona Doll Approach influenced teachers and pupils positively. According to her published reports, Cook points out in her research that teachers indicated positive opinions about the Persona Dolls, while the duration of its implementation and the difficulty of coping with a large number of pupils in the class were cited as disadvantages to the approach. These outcomes also support the current research findings.

Results obtained with preschool teachers taking part in the first step of the research –in which the scale was developed - within the parameters of criteria regarding preschool teacher attitude towards the Persona Dolls Approach were observed to have a more negative attitude towards the Persona Doll Approach in correlation to the level of diversity (handicaps, immigrant, ethnic, or language diversities) among the children of their current or previous class groups. The Fish Report (From 1985: Brown,1998) data indicated that teachers involved in inclusive teaching were making significant steps towards respect for diversity in their teaching, and that teachers in the process of engaging in the planning and provision of education for more diverse learning groups in which disabled children were included alongside those without disabilities on an equal footing, as envisaged within the curriculum, began to review and overcome their own prejudices which enabled them to develop respect for diversity and to better provide a non-discriminatory learning environment.

As a result of the initial stage of research, the scale development process, in which reliability was calculated as coefficient of the test repeat test approach, the highest points were awarded to the first sub-dimension entitled "The Objectives of the Persona Doll Approach". According to which dimension, the Persona Doll Approach aims to prevent prejudicial behaviours in children, improve empathy and the ability to solve problems, enable children to develop alternative strategies when faced with problems and aims to develop individuals respecting diversity, around which items its sub-dimension factors were duly organised. In research conducted by McClement (2004) teachers were found to be of the opinion that the Persona Doll Approach's main objective was, aside from addressing personal and social issues, to solve problems which arise in the classroom. One of the outcomes of Eve Cook's research (2004) was to confirm that children form empathic connections with the Persona Dolls during classroom implementation. The studies carried out by Carol Smith (2009) show that the Persona Doll Approach serves to enhance the self-esteem, empathy, and respect for diversity of both teachers and their pupils. These results also corroborate this research to some extent.

The preschool teachers in project phase 2, trial/control pre test- post test model who took part in two day Persona Dolls training were assigned to the trial group while preschool teachers with no such training were assigned to the control group. Both groups were balanced according to the validity-reliability analysed teacher survey and the OÖÖKBYİTÖ results compiled in the first step of research. The most striking result of this stage of research was in the post test in which attitude of the trial group was found to be significantly more positive than in the preliminary test. This outcome was an expected and desired outcome for the researchers. The final test OÖÖKBYİTÖ total, the aims of the

Persona Doll approach, the teacher's perception of the approach and the sub-dimension points of teachers' perception of proficiency all improved significantly over the preliminary tests. The sub-dimensions indicate that the Persona Doll Approach helps children to express their ideas and feelings and prevents prejudice-based, biased behaviour. The approach supports children in developing alternative problem solving strategies and helps them improve skills in this area. It was found that teachers readily considered that new approaches were necessary to support the development of positive identities in children and they expressed the need for self-improvement and practical applications with wider-scoped training before implementing the Persona Dolls Approach. Research carried out by Nicola Ann Irish (2009) on the efficacy of an emotional literacy acquisition intervention program aimed at raising the emotional literacy levels of preschool pupils through the implementation of Ububele-Persona Doll programs was conducted with a sample group of 35 participants in two separate preschools, one group functioning as the trial group, the other as the control group. The DANVA2 test which definitively measures factors related to emotional literacy was implemented in a pre – post test format with the participants. The Ububele-Persona Dolls were employed on alternate-weeks in classes over 12 weeks. The emotional literacy of pupils from the trial group was observed to have been significantly impacted at the end of the program. At the conclusion of the study, teachers from the control group were also instructed in the Ububele-Persona Dolls Approach. A further study conducted by Carol Smith (2009) involved evaluating survey participants' questionnaires from 420 early childhood teachers trained in the Persona Doll Approach for the purposes of the research. Survey results indicated the Persona Doll Approach training to be effective. These results support the findings of the present experimental research.

Although the Persona Doll Approach is a relatively new concept in the field of preschool education, its efficacy is well supported in the research. Persona Dolls and their stories can be used as effective tools against the prejudice and discrimination with which young children are faced from a very early age. Thus, it may be possible to raise a generation of tolerant individuals who live in peace in an ever-changing and evolving world, and who possess the skills of empathy and respect for diversity. Early childhood educational programs should address the issue of respect for diversity not only in intellectual, social and emotional terms but also in all areas of development. Teachers should be enabled to integrate the topic of respect for diversity into a greater number of activities throughout the curriculum. The Ministry of National Education could organize training programs under the heading of "Implementing Respect for Diversity Education Programs ". Degree programs could be modified to include such innovative and diverse approaches in education. The scale developed within the current research could be further applied with teachers working in other provinces, normed, and a similar scale dedicated to children's attitudes towards Persona Dolls could be developed, analysed for validity and reliability and utilised within experimental qualitative work with children and in longitudinal studies with teachers.

This article, an initial study on the subject of the Persona Dolls Approach in Turkey, is based on the work carried out during preparation of the first post-graduate thesis to be completed in this field. As such, it is anticipated that the principles defined within this study will provide benchmark material for any future research to be carried out in this area.

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