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## Qualification scale for early childhood teachers

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### Abstract

Many researchers carried out studies with regard to teacher qualifications and teacher education programmes which provide teachers with features that must have. During the development of Teacher Education Programme, generally institutional dimension have been considered and the effect of policy makers have been seen. However, because the family and society are also involved in the students' education, family's opinions should also be considered during the development process of teacher education programmes. For this reason, in this study, the qualifications of teachers were composed according to the families' opinion, and were converted on a scale. The teacher qualifications scale was designed to have 171 items in 7 groups. These groups were named as the following basic teacher qualification components: ability in art, personal characteristics, language proficiency, quantitative ability, world knowledge and teacher qualification components in preparing the learning environment. These qualifications were based on the items in the related factor group. Cronbach alpha for internal consistency of subscales was calculated and was as follows: .97 for the first factor, .73 for the second factor, .91 for the third factor, .88 for the fourth factor, .86 for the fifth factor, .82 for the sixth factor and .83 for the seventh factor. The mean and standard deviation was calculated with the correlations which were factor points of the teacher qualifications scale. There are high positive relations between the basic qualifications factor point and the total point of scale ( $r = 0.97, p < .001$ ). There are .47-.77 positive and meaningful relations between other factors of the scale and the total points. Education and art factors within factor points have not been found to be meaningful relations. For the other binary combinations of factors, a positive and meaningful relation has been found.

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### 1. Introduction

As the demand for a qualified labor force has increased in recent years, the need for well-qualified teachers has proliferated. In order to train qualified teachers, programmes have been reformed in parallel with new developments in science and technology, and with changes in societal needs for labor force qualifications. During these reformations, teacher training programmes are frequently examined in terms of whether or not they attain these necessary qualifications to meet the needs of their students.

Many researchers have studied teacher qualities and discussed teacher training programmes, through which students benefit from these qualities that are considered as a must for a teacher (Darling-Hammond and Youngs, 2002; Goe, 2007; Rice, 2003; Wayne and Youngs, 2003; Wilson and Floden, 2003). According to Mayeroff (1971), the necessary characteristics that a person must possess in order to care are knowledge of the recipient, patience, honesty, trust, humility, hope, courage. Teachers need several kinds of knowledge about learning. They need to think about what it means to learn different kinds of material for different purposes and how to decide which kinds

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of learning are most necessary in different contexts. Teachers must be able to use different teaching strategies to accomplish various goals, as well as many methods for evaluating students' knowledge and assessing students' approaches to learning. Teachers need to know about collaboration: how to structure interactions among students so that more powerful shared learning can occur; how to collaborate with other teachers; and how to work with parents to learn more about their children and to shape supportive experiences at school and at home (Hammond 1998).

Programmes at teacher training institutions where these qualities are acquired are helpful for teachers in understanding the expectations and realities of their profession. In designing the teacher education programmes, knowledge of subject matter, teaching strategies, learning styles and students' characteristics are to be unified. According to Holm and Horn (2003), a teacher training programme should:

- equip teachers with knowledge and skills so that they can help students with what to know and how to know, and endue teachers with teaching strategies which help them get used to powerful learning experiences;
- make them acquire and understand knowledge of their subject area;
- help them to comprehend the role of evaluation and to design different ways of evaluation, giving them knowledge about its application;
- instill in them a habit of reflection;
- teach them to be in cooperation with their colleagues, families and society.

In the designing of teacher training programmes, an endeavor was sought to form relationships with families, schools, and children in order to build partnerships (Pianta, et al, 2001). Such partnerships are essential for maintaining a coherent socio-cultural awareness. A healthy transition from family toward the development of common goals in the context of articulating a shared vision would benefit the programme, policy makers (Pianta, et al, 2001), teachers and society (Groak & McCall, 1996). Prospective teacher trainees also gain knowledge about features of family and society, such as socio-economic conditions, family structure, relations within the family, language used at home, cultural values, social resources and organisations which help the child and the family (Seefeldt 2002, Jacobson 2002). Consequently, one of the primary research goals in this study was to gather information from the families concerning their expected views with regard to the qualities of a well-qualified pre-school teacher. Secondly, it is intended to turn these statements into a questionnaire to determine the components of pre-school teacher qualifications. Thus, the focus of this paper is to describe and develop a reliable and valid pre-school teacher qualifications instrument to contribute to the development and evaluation of pre-school teacher training programmes.

## **2. Method**

Data collection for determining the professional qualifications of pre-school teachers was completed in two stages. In the first stage, the question 'What are the main qualities of a well-qualified pre-school teacher?' was asked of 500 parents of different age groups and occupations who have children at pre-school age. A collection of parents' views was gathered with the help of university students attending the pre-school teacher training programmes. These students were trained with regard to the way in which data should be collected, and they were required to write the parents' answers without any change. Open-ended answers of each parent were thoroughly examined, and 2,500 qualities of a pre-school teacher as indicated by parents were noted.

In order to determine the qualifications of pre-school teachers defined by researches in relation to the expectations of society, the following steps are suggested to be taken by Harpole (1989):

- determination of the teacher qualifications expected by society;
- validation of these determined qualifications by the practitioners of the occupation;
- evaluation of these determined qualifications by specialists, taking the necessities of the target group (pre-school children) into consideration;
- grouping of the qualifications according to different subject areas;
- listing of the qualifications expected to be attained.

Keeping these steps in mind, in the second stage, all of these 2,500 qualities were classified according to cognitive, affective and psycho-motor domains and, as a result, 50 groups of qualities that make up the teacher qualifications were formed and used to prepare the questionnaire. In total, the questionnaire included 221 items regarding different components of qualifications on a 5-point Likert scale.

While preparing the questionnaire, two steps were taken. First, some of the characteristics indicated by parents having similar contents such as ‘s/he should speak well’, ‘s/he should use Turkish well’, ‘his/her speech should be understandable’, ‘s/he should speak politely’ were re-expressed by the researcher as ‘s/he should use Turkish proficiently’. Secondly, items indicating language proficiency (one of the teacher qualification components), were reformed by the researcher to refer to different aspects of this proficiency, such as ‘being careful about his/her speech with children’, ‘being careful about his/her choice of words’, ‘accepting speech style being effective on communication’, ‘having a good command of Turkish grammar’, ‘understanding the importance of intonation while speaking’, ‘being willing to improve vocabulary’, ‘being careful about pronunciation’ and ‘evaluating the effect of careful speech in the language development of the child’. These two steps were repeated while forming items related to other teacher qualification components, such as music abilities, quantitative abilities, etc.

This questionnaire was sent to 100 respondents, including the academic staff of pre-school teacher training programmes of different universities, teachers working at kindergartens and senior students at the departments of pre-school teacher training. In addition to sending the questionnaire to the respondents by post, interviews were also made during the data collection. Questionnaires were returned to the researcher by 25 area specialists, 26 pre-school teachers and 37 final-year students at the department of pre-school teacher training of different universities; therefore, the analysis of data is based on a total of 88 questionnaires. For calculating factor analysis, it is suggested that sample size should be twice the total number of items. On the other hand, in the event that numbers of factors are few and distinctive, it is accepted that 100 is a sufficient sample size for factor analysis (Kline, 1994). In this study, since the numbers of factors are limited and distinctive, data collected from 88 valid questionnaires are considered as reliable for calculating factor analysis. Having a small sample size is considered to be the limitation of this study.

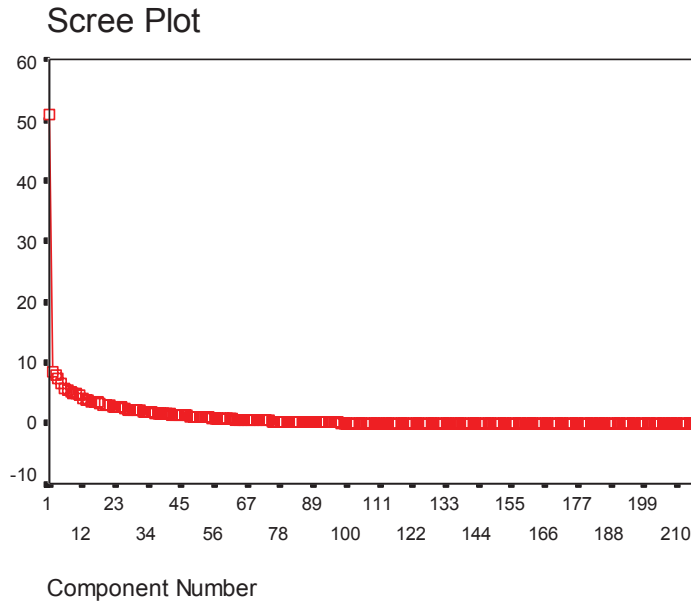
The answers were graded as 5 = very important, 4 = important, 3 = undecided, 2 = not important and 1 = not important at all. These scores were ordered from highest to lowest. According to this ordering, 27% of the participants who get the highest total scores and 27 % of participants who get the lowest total scores were determined. These two groups of participants were labeled as “highest group” and “lowest group”. These two groups were taken as the criterion groups, and the validity coefficients of behaviours (‘t values’) were estimated (Turgut & Baykul 1998). As the sample consists of 88 participants, 24 participants were defined for each group while forming the highest and lowest groups with the rate of 27%. It is indicated that in the event of equal sample size, which is more than 15, the result of the analysis can be considered as reliable unless there are extreme deviations from the assumption of normality (Green, B. G., Salkind, M. J., & Akey, T. M., 1997). As a result, five insignificant items were excluded at the level of  $\alpha=0.05$ . At the same time, the basic component factorial analysis was applied to 216 items. The purpose of using factorial analysis is to gather the related items in a single factor in order to determine conceptually related items in a lower number of components (Büyüköztürk, 2002). In the factorial analysis, the items with greater than 0.25 points were chosen.

The loadings are considered moderately high if they are above 0.3 (Kline, 2000). However, many analysts, for example Cattell, regard loading as low as 0.15 as salient (Kline, 2000). In this study, the loading level was cut at and above 0.25. In the statistical analyses, SPSS software package (Version 11.05) for Windows was used.

Parents in cities were from the middle class, and most had high school or university degrees. The collection of parents’ opinions was completed with the help of university students at pre-school teacher training programmes. These students were trained with regard to the data collection procedure and they were required to record the parents’ answers without any changes or modifications.

### 3. Result

By analysing the scree plot (see Figure 1), the first results of the factor analysis were evaluated.



According to the results of factorial analysis, the teacher qualification components were grouped under 7 headings. The occurrence of 171 components in one of these groups creates the foundation for pre-school teacher training programmes.

Teacher qualification groups were named in basic teacher qualification components: ability in art, personal characteristics, language proficiency, quantitative ability, world knowledge, and teacher qualification components in preparing the learning environment. All of these are based on the items in the related factor group. In the end, the teacher qualifications scale was designed as having 171 items in seven groups as shown in Tables 1 to 8.

The correlations between factor groups and mean and standard deviation values were presented in Table 1.

Table 1. Binary Correlations among the Scale Points and Descriptive Statistics

	The number of items	1	2	3	4	5	6	7	Mean	SD
1. Basic components of teacher qualifications	105	-							488.14	26.82
2. Abilities in art	8	.36**	-						33.19	3.47
3. Personal characteristics	19	.71**	.33**	-					90.45	5.15
4. Language proficiency	8	.51**	.23*	.46**	-				38.64	2.42
5. Quantitative ability	7	.57**	.38**	.40**	.38**	-			29.47	3.87
6. Components of teacher qualifications in preparing the learning environment	11	.61**	.15	.50**	.38**	.40**	-		52.60	2.81
7. World knowledge	13	.62**	.44**	.46**	.43**	.55**	.40**	-	59.18	4.00
Total	171	.97**	.47**	.77**	.58**	.67**	.65**	.71**	791.67	40.42

\* p<.05 \*\* p<.01 n=88

An almost perfect positive correlation was observed between basic teacher qualification components and the overall scale ( $r = 0.97, p < .001$ ). There were also positive and significant correlations ranging from .47 to .77 seen between basic teacher qualification components and other factors ( $p < .001$ ). The only factors that did not reveal any significant correlation were education and art. Other dual combinations of factors had positive and significant correlations. Those groups which show the teacher qualifications were discussed below.

**Basic Teacher Qualification Components**

The basic components of the teacher qualifications, presented in Table 2, indicate those that a pre-school teacher should generally have.

Table 2. Basic Teacher Qualification Components (105 Items)

BASIC COMPONENTS	Factor loadings after rotation	Item discrimination indices (t- values)
Determining the basics of child development	0.82	11.62
Identifying the developmental needs of the child	0.76	9.14
Understanding the importance of specific behaviours depending on individual differences among children	0.75	10.83
Expressing oneself appropriately	0.72	11.79
Identifying individual differences of children	0.70	8.61
Being respectful to human rights	0.70	10.83
Defining reasons of developmental differences	0.70	10.54
Evaluating the importance of the early childhood education period	0.70	9.86
Conceiving the characteristics of sexual development	0.69	15.66
Evaluating the child as an individual	0.68	8.49
Evaluating the education techniques according to individual differences	0.68	12.23
Being informed with regard to child rights	0.68	9.33
Exploring the teacher's position in child development	0.68	8.64
Recognising the importance of obeying the rules	0.67	13.17
Recognising the difference between health and nutrition	0.66	21.21
Using the education techniques according to development stages	0.66	12.93
Evaluating the developmental needs of child	0.66	8.30
Accepting the child as an individual	0.65	8.49
Recognising the importance of communication in human interactions	0.65	9.14
Evaluating the impact of learning environments on development	0.63	10.26
Having knowledge about the characteristics of different developmental stages	0.63	5.91
Having basic knowledge in mathematics	0.63	11.23
Being responsible with regard to the child's family	0.63	13.17
Differentiating individualistic differences among children	0.63	7.13
Preparing activities for developing writing skills	0.62	10.00
Being respectful of the individual's basic needs	0.61	10.11
Obeying the rules of guiding children	0.61	13.97
Conceiving the differences among different stages of childhood development	0.61	7.35
Putting forward different suggestions	0.60	9.14
Using educational techniques according to different ages	0.60	11.09
Evaluating developmental characteristics of the child	0.60	7.09
Evaluating the relation between different domains of development	0.60	8
Being willing to teach habits of nutrition to the child	0.60	11.09
Knowing the rules of living within the community	0.60	10.75
Establishing a relationship between pre-school education and later stages of education	0.59	8.30
Comparing different views on pre-school education	0.59	11.30
Comprehending the cognitive developmental periods of children	0.59	13.24
Accepting that every child is specific	0.59	6.14
Recognising individual differences	0.58	8.12
Having knowledge about painting techniques	0.57	17.10
Being open to different ideas	0.57	10.91
Conceiving the theoretical background of sex education	0.57	13.86
Being patient while answering children's questions	0.57	6.36
Recognising the importance of adults' behaviours in child education	0.57	7.67
Having knowledge on basic notions of communication	0.57	8.41
Evaluating the effectiveness of different teaching techniques	0.57	15.16
Being consistent in behaviours	0.56	10.83
Meeting children's needs immediately	0.56	8.49
Comprehending the principles of Atatürk	0.56	8.63
Believing in the importance of developing the teacher's ability to draw	0.55	7.74
Preparing activities for children to develop cognitive abilities	0.55	9.99
Evaluating development as a whole	0.55	9.27
Defending his/her own ideas	0.55	11.09
Evaluating the external factors effecting development	0.55	8.63
Evaluating the importance of following daily activities in terms of his/her occupation	0.54	12.39
Having knowledge about authors writing child books	0.54	7.89
Establishing the relation between education and development	0.54	11.09
Participating in scientific meetings related to his/her occupation	0.53	7.89
Guiding children in producing solutions to daily problems	0.53	6.37
Evaluating the questions of children in terms of their ages	0.53	7.67

BASIC COMPONENTS	Factor loadings after rotation	Item discrimination indices (t- values)
Volunteering to follow up technological development	0.53	10.82
Taking individual differences into consideration in the learning environment	0.53	7.41
Evaluating education programmes according to different ages	0.53	6.69
Recognising extraordinary situations and events in class	0.52	7.89
Recognising differences among teaching techniques	0.52	9.27
Recognising developmental differences	0.51	7.35
Being willing to solve problems of children	0.51	7.41
Evaluating differences among approaches in pre-school education	0.51	9.96
Being consistent in applying his/her decisions	0.51	6.37
Evaluating the effect of nutrition on development	0.50	11.79
Being determined in applying his/her decisions	0.50	6.04
Being sensitive to scientific developments in his/her occupation	0.50	7.41
Being able to evaluate the factors affecting development in learning environment	0.50	8.99
Being alert to the potential problems among children	0.50	6.37
Thinking about the events	0.50	7.74
Evaluating the characteristics of development in different ages	0.49	6.63
Evaluating children individually	0.49	5.27
Believing in the importance of arranging an appropriate environment to provide development	0.49	6.53
Evaluating the importance of pre-school education in terms of cognitive development	0.48	7.49
Evaluating the importance of being positive about other people	0.48	6.18
Producing educational opportunities in accordance with the local facilities	0.47	9.86
Evaluating the importance of contemporary life	0.47	6.48
Evaluating the similarities among approaches in pre-school education	0.47	9.36
Listening to others' ideas	0.47	6.87
Evaluating the basic notions related to special education	0.47	7.79
Evaluating the characteristics of development in different ages	0.47	8.64
Evaluating the characteristics of development in terms of education	0.47	6.37
Choosing appropriate instruments according to the age of children	0.45	5.48
Having knowledge about theoretical background of child play	0.45	8.41
Behaving accordingly to the principles of guidance	0.43	7.23
Being alert to the symptoms of diseases	0.42	6.53
Recognising the importance of interests and skills of the child in early childhood education	0.41	3.81
Understanding the importance of music in childhood	0.41	7.06
Believing in the importance of the use of love expressions	0.41	6.04
Understanding basic human rights	0.40	7.07
Understanding the theoretical background of child development	0.40	8.40
Attending exhibitions about education	0.40	4.85
Being willing to read publications on the field	0.39	4.63
Observing children in their natural environment	0.38	6.53
Taking measurement for problems that a child might come across during his/her development	0.38	6.87
Evaluating the environmental factors affecting the child's health	0.38	7.04
Following scientific innovations about his/her own field through internet	0.37	7.97
Saving economical sources while preparing instruments	0.35	9.21
Behaving equally to all children	0.35	3.84
Making use of computer in preparing education materials	0.31	5.59

The factorial loading values of these teacher qualification components are between 0.82 and 0.31. These components are thought to be earned in three stages: (1) knowledge of subject area including theories, concepts, principles and facts related to pre-school education, (2) skills consisting of in-classroom activities, teaching techniques taught at teacher training programmes covering teaching skills of pre-school teachers and (3) skills and abilities which will be developed in teaching practices by the candidate teacher. All of these teacher qualification components have vital importance in the understanding of children's reactions, world and culture, and the candidate teachers possessing these components are able to facilitate active learning for the child. In order to do so, they should have already developed reflective thinking, i.e., problem-solving skills and, consequently, teaching methods in order to prevent possible problems. Reflective thinking is a means to rebuild the learning experiences such that students can understand what they are having trouble grasping and learn better (Yoo, 2002). As indicated in the studies of Geringer (2003) and Carini & Kuh (2003), these three groups of teacher qualification components are those that a well-qualified teacher who is academically proficient and active, and who makes his/her students learn effectively and provides his students with rich educational and social opportunities should have. These components can also be earned during the teacher training programmes.



**Ability in Art**

The factorial loading values of the teacher qualification components related to art are between 0.66 and 0.25. These components are presented in table 3.

Table 3. Abilities in art (8 items)

BASIC COMPONENTS	Factor loadings	Item discrimination indices (t- values)
Believing in the importance of folk dance in pre-school education	0.66	3.78
Believing in the importance of developing the teacher's skill of playing an instrument	0.64	2.13
Being willing to draw pictures used in materials	0.60	3.21
Being willing to play a musical instrument	0.52	7.21
Having knowledge about basic notions in music	0.48	5.75
Using different techniques in painting	0.35	6.39
Being aware of environment	0.35	5.45
Encouraging children to draw pictures	0.25	7.78

While the teacher qualification components related to basic art skills are among the basic components teacher qualification, they express the development of attitude towards the importance of art in pre-school education. It is emphasised that these components should be used to develop children's art skills such as music and painting, and they also should be used as instruments in classroom activities.

The study of Gharavi and Junkin (1993) evaluates the opinions of pre-school teachers by examining their skills in music (Gharavi and Junkin, 1993). The results of this study reveal that 50% of teachers have low level of skills in music, and 75% have difficulty in learning new songs. However, they also reported that teachers were annoyed with asking for help from professionals about in-class activities related to music. As such, it is emphasised that musical activities are very important in developing feelings, images, interpreting different symbols in pre-school education and teachers should be proficient in this area.

**Personal Characteristics**

Table 4 displays the teacher qualification components related to personality which a pre-school teacher should have.

Table 4. Personal Characteristics (19 items)

BASIC COMPONENTS	Factor loadings	Item discrimination indices (t- values)
Performing his/her job carefully	0.68	6.36
Carrying the responsibility of his/her behaviours	0.61	6.37
Being punctual	0.58	7.89
Telling the truth	0.55	8.91
Having communicational skills	0.55	4.99
Understanding the importance of pre-school education	0.53	2.16
Keeping the class in good order	0.50	7.35
Believing in the importance of telling children the truth	0.49	4.20
Being consistent in making decisions	0.48	5.58
Completing tasks on time	0.44	6.37
Being willing to take responsibility	0.42	8.30
Understanding the importance of working actively	0.41	6.28
Being well organized	0.38	4.99
Taking his/her promise	0.35	11.23
Being determined	0.35	13.50
Defining interpersonal limitations	0.32	5.55
Being cooperative	0.32	7.89
Being respectful to others' opinions	0.26	4.85
Being confident	0.24	7.89

Factorial loading values of personal characteristics are between 0.68 and 0.24. The personality of the teacher affects the personality development in the child. Mayeroff (1971) states that a pre-school teacher who takes the responsibility of a young child should be a knowing recipient, patient, honest, trustful, modest, hopeful and courageous. These teacher qualification components express the teacher's attitudes and habits which have been earned in the previous years of his/her life. This situation necessitates that a pre-school teacher should already have some of these components before starting teacher training. Depending on this, a pre-school teacher should love children, understand their feelings, and value the children highly because these qualities positively affect young children's learning practices and are thought to be effective in children's learning at the highest level.

Depending on the children's expectations from their teachers, Clem (1999) lists qualities of a well-qualified teacher in his study as follows:

I want my teacher...

- to smile at me,
- not to make fun of me,
- to tell me the truth,
- to keep his promises,
- not to allow anyone to hurt me,
- to help me to understand myself,
- to believe me,
- to remember that I am a child. (p.48)

It is thought that these characteristics can be earned by candidate teachers through practices requiring social relations such as field studies and group work carried out during the teacher training programme. Some of these characteristics should already be earned before entering the teacher training programme.

### **Language Proficiency**

Table 5 includes the teacher qualification components related to language proficiency of teacher.

Table 5. Language Proficiency (8 items)

BASIC COMPONENTS	Factor loadings	Item discrimination indices (t- values)
Being careful about his/her pronunciation	0.78	4.30
Understanding the importance of intonation while speaking	0.69	5.06
Paying attention to his/her speech with children	0.68	3.006
Accepting the effect of speaking on communication	0.67	5.60
Evaluating the effect of correct speech on the linguistic development of child	0.57	5.60
Paying attention to word choice while speaking	0.57	3.61
Using grammatical rules correctly	0.43	11.62
Being willing to improve vocabulary	0.34	6.37

The factorial loading values of these components are between 0.78 and 0.34. This group involves components related to language proficiency which includes using words clearly and understandably. It also consists of the importance of this proficiency in relation to child education. Since young children acquire receptive and expressive skills in language proficiency during their daily practices with their teacher, the language proficiency of the teacher can be said to be very important.

Girolametto et al. (2000) studied the relationship between the teacher's instructions and the children's language output. Their results indicate that increasing the control of the child's behaviours by using instructions will decrease the amount that the child speaks. This shows the importance of qualifications that an educator must have when speaking and writing in daily activities.

The linguistic development of young children is possible only by giving them the opportunity to use language proficiently in oral communication. So, teachers should be careful about their language use and improve their abilities in preparing activities in which children can speak. McDonald and Pien (1982) state that adults prefer having conversations with children rather than teaching them the language, and if grammatical rules of the language are applied in these conversations correctly, then it positively affects the children's language acquisition.

Moreover, aside from his own language proficiency, the teacher should have knowledge about the language used at the child's home. Therefore, it is possible for the teacher to solve the linguistic problems that s/he might come across during the children's learning practices.

### **Quantitative Ability**

Table 6 consists of quantitative abilities that a pre-school teacher should have.

Table 6. Quantitative Ability (7 items)

BASIC COMPONENTS	Factor loadings	Item discrimination indices (t- values)
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Planning activities related to mathematics depending on theoretical background	0.58	8.73
Having knowledge about basic notions of mathematics	0.57	6.59
Using real objects in teaching basic mathematics	0.57	9.07
Using mathematical concepts in daily activities	0.53	8.40
Establishing relationships between daily activities and basic mathematical notions	0.47	8.06
Evaluating the development of the child's mathematical notions	0.39	10.36
Understanding the development of the child's quantitative ability	0.33	10.65

The factorial loading of these components' values are between 0.58 and 0.33. The pre-school era covers the years when the cognitive abilities of children develop very rapidly. Children at these ages are very curious and inquisitive. They investigate everything around them and they expect logical answers to their questions. Their quantitative success in later years is closely related to experiences in their early childhood, which means that developing positive attitudes towards mathematical concepts in basic and higher education depends on their experiences in their pre-school years (Henniger, 1987; Metin, 1994; Aktaş, 2002).

Children at early childhood come across mathematical concepts in their daily lives. What is important here is how children gain these concepts, because children perceive the world concretely. The task of the teacher is to prepare appropriate practices for children in which they can learn these concepts (Greenberg, 1993).

It is expected that teachers develop children's intuitive quantitative ability, helping them to understand numerical systems and to comprehend the relations between objects. So, teachers should avoid children from rote learning and repetitive exercises; instead create opportunities for children to understand abstract notions, to solve problems, and to make exercises with concrete objects, pictures, words and symbols to develop their thinking process. For this reason, a pre-school teacher should have basic quantitative abilities and should have knowledge about techniques and methods for teaching these abilities.

### *The World Knowledge*

Table 7 involves the components of the teacher qualifications related to the world knowledge of the teacher.

Table 7. World Knowledge (13 items)

BASIC COMPONENTS	Factor loadings	Item discrimination indices (t- values)
Following events in social life	0.65	4.89
Following the media	0.56	5.01
Being able to answer children's questions about the history and geography of the country	0.54	5.49
Having basic knowledge about the human body	0.49	3.55
Being sensitive to child health	0.44	3.65
Paying attention to his/her own behaviours especially for the nutrition habits	0.38	7.65
Reading a daily newspaper	0.36	13.82
Evaluating children's programmes on TV	0.34	5.62
Reading publications related to his/her occupation	0.32	4.24
Evaluating the place of children's publications in pre-school education	0.32	9.98
Taking preventive measures for diseases	0.31	3.14
Planning daily activities	0.31	8.43
Respecting privacy	0.29	6.74

Young children are very curious about everything around them; they ask questions consistently and want adults to give logical answers to their questions. So, adults around young children should have enough general information to give them correct answers. Therefore, pre-school teachers are expected to search consistently, follow the media and cooperate with the family and society. Moreover, pre-school teachers should be able to solve the health and nutrition problems that they may come across during day care. The pre-school teacher is the first adult with whom the child is together after his/her parents, and has an important effect on the child's learning and development. For this reason, the teacher should be careful about his/her behaviours and should be trained in the way that s/he should take over the responsibility and care of a child. Freeman et al. (1999) state that a teacher can be trained with the help of a programme in the following qualities: 1) experiencing caring; 2) practicing caring; 3) initiating and sustaining caring relationships; and 4) continuing reflections and refinements.

### *Components of the Teacher qualifications In Preparing Learning Environment*

Table 8 consists of the components of the teacher qualifications related to preparing the pre-school learning environment.

Table 8. Components of The Teacher Qualifications in Preparing the Learning Environment (11 items)

BASIC COMPONENTS	Factor loadings	Item discrimination indices (t- values)
Understanding the importance of play in the child's life	0.64	2.55
Evaluating the child at play	0.59	2.56
Preparing educational programmes suitable to the development level of children	0.53	5.89
Being willing to cooperate with the family	0.43	6.84
Evaluating the appropriate material while preparing instruments	0.41	7.07
Using the principles of development in planning teaching activities	0.37	6.64
Preparing playground for the children	0.36	6.37
Producing games/plays in learning environment	0.36	4.231
Being willing to prepare instruments	0.34	5.06
Being careful about security in playground	0.33	4.24
Paying attention in the preparation of the learning environment	0.32	7.35

The pre-school era involves the years when learning occurs very rapidly. Teaching can only occur in the presence of learning. Teaching the candidate teachers with only theoretical knowledge is not enough to make them learn how to prepare the learning environment. They should be equipped with the practical skills and techniques of teaching in a subject area such as mathematics, music, painting, etc. Moreover, since the family environment of young children has an important effect on their learning, the teacher should be in cooperation with the family continuously. They also should be able to produce solutions for the problems that a child may come across while learning and they should develop their reflective ability to help their children learn. Qualified early childhood teacher training programmes should aim to train teachers who will support physical, social and emotional development of children, as well as their cognitive development. Early childhood education should present children with meaningful learning practices, rather than attempt to make them more intelligent, meaning that it should prepare environments in which children recognise their specific abilities. As such, pre-school teachers are expected to improve their caring and reflecting skills which will create these types of practices.

After the above-mentioned construct validity study of the scale, its reliability study was conducted. The Cronbach alpha for interal consistency of subscales was calculated. The alpha loadings were found to be .97 for Factor 1, .73 for factor 2, .91 for factor 3, .88 for factor 4, .86 for factor 5, .82 for factor 6, and .83 for factor 7.

#### 4. Discussion

The number of studies on developing teacher training programmes has increased as a result of the appreciation of the effects of pre-school education on children's development. Young children cannot be treated free of consideration of their families and society, and so their families should be invited into developing pre-school teacher training programmes. Pre-school age is the period in which the development of a young child is at his/her utmost level, and the training of pre-school teachers who can take the responsibility of caring for children and raising them as creative, productive and active individuals is very important. Since pre-school teachers have an important role in the child's development and learning, they are expected to be individuals who learn continuously, can take over the child's care, have knowledge about economical, social and cultural features of the society, can establish positive relations with the children as well as his/her family and colleagues, and are highly motivated and active individuals. Hammond's (2000) study on the qualities of teachers examined the effect of teacher's qualifications on students' success and emphasised that a teacher should have qualifications in terms of general academic success, knowledge of subject matter, learning and teaching abilities, teaching experience, and the behaviours that a teacher should exhibit. Accordingly, studies on the qualities of teacher training programmes have emphasised that a teacher training programme should be: (1) experiential, (2) grounded on participants' questions, (3) collaborative, (4) connected to and derived from teachers' work with their students, (5) sustained and intensive and (6) connected to other aspects of school change (Hammond 1998).

This study is based on parents' views about the professional qualifications of a pre-school teacher and the determination of the teacher qualification components that can contribute to improve pre-school teacher training programmes. As a result of this study, teacher qualification, which is expected by the families, was classified into 7 groups. All groups related to the teacher qualifications were found to be significantly correlated with each other. In particular, an almost perfect positive correlation was observed between basic components of the teacher qualifications and the overall scale of the basic components of teacher qualifications. These findings can be thought of as representing the basic teacher qualifications scale. However, the correlation between ability in art and the

teacher qualifications in preparing the learning environment was found to be insignificant. It can be speculated that teachers might have perceived this ability to be unnecessary or they might have considered this ability to be a special one which should be carried out only by content specialists. When the components of the teacher qualifications in these groups are examined, candidate teachers are expected to already have some of them before entering these teacher training programmes. The teacher qualifications include personality characteristics, language proficiency, and world knowledge. With the help of teacher training programmes, it is possible to develop these teacher qualification components through the candidate teacher's participation in conferences, workshops and seminars (Holm & Horn 2003), as well as in campus life, participation in social activities and communication with the academic staff at the programme. Moreover, in choosing candidate teachers, which is also very important as Carini and Kuh (2003) emphasised, programmes should be careful that candidates have at least a minimum level of these expected components. The basic teacher qualification components in teacher training programmes are abilities in art, quantitative ability, language proficiency and skills in preparing the learning environment. The components within these groups necessitate subject area knowledge in childhood development and education, considering families, skills, attitudes and habits which will form theoretical knowledge about the learning-teaching processes and practices. Fieldwork studies will also allow candidate teachers to gain experience in preparing learning environments for children. These teacher qualification components give the teacher two important roles: 1) being a caring teacher who is patient, reliable, loves children and can take the responsibility for their care and 2) being a reflective teacher who is able to use effective teaching techniques in classroom activities in order to solve possible problems related to the children's learning.

It can be said that the items such as 'Evaluating the environmental factors affecting the child's health', 'Being alert to the symptoms of diseases', 'Evaluating the effect of nutrition on development', 'Recognising the difference between health and nutrition', 'Being willing to teach the nutrition habit' in the Basic Components of Teacher Qualifications suggest teachers be expected to be caring toward children in pre-school. Moreover, items such as 'Being alert to the potential problems among children', 'Being willing to solve problems of children', and, 'Guiding children to produce solutions about daily problems' require pre-school teachers to be caring in their profession.

Items such as 'Recognising developmental differences', 'Evaluating education programmes according to different ages', 'Evaluating the education techniques according to individual differences', 'Evaluating the education techniques according to individual differences', 'Evaluating the effectiveness of different teaching techniques', 'Using the education techniques according to development stages', and 'Defining reasons of developmental differences' urge preschool teachers to be reflective teachers in their profession. These items in the qualification scale cover the cognitive and affective skills related to child development and education in order to ensure learning in classroom environments.

Training of pre-school teachers for acquiring the skills and qualities to fill these two important roles is possible by putting forward the teacher qualification components clearly. Teachers should also contribute to what a teacher training programme should be. A teacher training programme based on professional qualities provides students with information about what is expected of them, makes them participate in activities which help them to learn, increases motivation of students and has a student-centered teaching and flexible approach (Moore and Pershing 1989). However, these programmes should be updated according to the needs of the changing world. So, the needs arising from cultural differences should be determined and educational technologies should also be added to these programmes.

As a conclusion, candidate teachers should be evaluated thoroughly with regard to all of their characteristics. Choosing candidate teachers should not be done by chance; societal expectations about the teacher qualifications should also be examined. In addition, pre-school teacher training programmes should be rearranged through inquiries made to childhood development and education specialists, education sociologists and education economists and programme developers, while also keeping the country's socio-cultural structure in mind.

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