

The Proficiency Perceptions and Usage Level of Conventional and Alternative Measurement Tools in Preschool Teachers

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Abstract: The aim of the study is to determine the proficiency perceptions and usage level of preschool teachers in designing, implementing and evaluating (judging) the conventional and alternative measurement instruments which are supposed to be adopted at schools and to reveal in accordance with their opinions to what extent they employ these instruments during education and training process. The study was carried out with the participation of 258 preschool teachers working in the province of Samsun. A survey with two sections was used in the study to collect the data. Descriptive statistics were exploited in the process of analyzing the data. In the context of the first sub-problem of the study, the teachers were seen to find themselves proficient mostly in portfolio, observation forms, gap filling, worksheets and open ended questions during the process of designing, implementing and evaluating (judging) the conventional and alternative measurement instruments. Within the scope of the second sub-problem of the study, portfolio, observation forms, anecdote records and gap filling rank first among the measurement instruments most frequently used by the teachers. The teachers also stated that portfolio, observation forms and gap filling sort of questions are the most useful while they have most difficulty in implementing control forms, observation forms and anecdote records. Consequently, it was seen that the teachers are able to use some of the conventional and alternative measurement instruments effectively while they have difficulty in employing such instruments as grading keys, grading scales and performance tasks.

Key words: Preschool • Conventional and alternative measurement instruments • Proficiency perceptions

INTRODUCTION

As the first step of formal education, preschool education shapes the future of children. It is the preschool education period when children develop fastest and are most affected by their surroundings. The education offered in this period is called preschool education. Gürkan (2000) defines preschool education as “an educational process which provides 0-72 month old children with rich stimulating environment suitable for their development level and individual characteristics; promotes their physical, mental, emotional and social development; leads them in the best way in accordance with the cultural values of the community and prepares them for primary education and exists in the unity of primary education” [1]. The objectives of preschool

education are defined by the Ministry of National Education (MoNE) as securing the physical, mental and emotional development of children in compliance with the general objectives of the National Education, preparing them for primary education, preparing a joint teaching environment for the children coming from disadvantaged families and regions and making them speak Turkish well and properly [2]. It is the fundamental objective of the education offered in this period to support the development of children in any ways and prepare them for life.

Utilizing the preschool education effectively and achieving the objectives of preschool education depend on a number of factors. Kağıtçıbaşı, Bekman and Sunar (1993) state that an effective preschool education depends on the quality of the elements of which

preschool education is composed and these elements are physical arrangements, materials, the program which is implemented, the teacher's attitudes, the evaluating methods which are implemented, teacher-children ratio and the cooperation between the school and parents [3]. Saracho ve Spodek (2007) emphasizes that the quality of preschool education program depends on the qualities of teachers [4]. Similarly, Düşek (2008) expresses that it is the teacher who assumes the vital responsibility for a proper preschool education and adds that it is only possible for the teacher to best fulfill this responsibility by means of the preparation of a systematic and well planned education program [5].

Preschool teachers make their plans considering the development features of children, their interests, personal characteristics and gains. Besides, teachers are supposed to make an evaluation in order to determine to what extent the planned activities have been carried out and their effectiveness.

In the preschool programs released by MoNE in 2002, 2006 and 2012, the evaluation process is handled in three categories as the evaluation of children, the evaluation of the program and the self evaluation of the teacher [6-8]. In the preschool education program 2012, it is recommended in the evaluation of children to observe the development of children, to use the observation forms to determine what children do and at which level and how they do it and to inform the parents of the reports prepared through the observations. In the evaluation of the program the teachers are supposed to evaluate the program they prepared and the plan they implemented thoroughly; in the self evaluation of the teacher they are supposed to evaluate themselves from different points of views. La Paro, Rimm-Kaufman and Planta (2006) state that teachers' opinions will be effective in determining what the following practices will be [9].

It is measurement and evaluation which acts as a guide in determining the effectiveness of the education program, how many of the behaviors which are aimed to be gained were gained and the changes occurring in students in the process. Waterman, McDermott, Fantuzzo and Gadsden (2012) say that the importance of the evaluations carried out in early childhood period, which includes preschool education period, has increased in recent years [10]. In the guideline which they designed jointly on the programs prepared for the children aged 3-8 and their evaluation process, the National Association for the Education of Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of

Education (NAECS/SDE) (1991) express that the evaluation is a documentation process of observing the children, recording and what and how they do. McDermott, Fantuzzo, Waterman, Angelo *et al.* (2009) points out that an ideal application should be as dynamic as it can include different evaluation processes and that the evaluations should be carried out frequently in short terms [11]. In parallel with the changes in education, there have been changes in the instruments of measurement and evaluation adding that alternative measurement and evaluation instruments which are student centered, focus on the process rather than the result, depend on skills rather than knowledge and put an emphasis on individual differences are increasingly replacing conventional measurement and evaluation instruments.

Since children in preschool education can't read or write, it is impossible to directly evaluate them. For this reason, preschool teachers, playing an active role, carry out evaluation activities by designing activities suitable for the development level of children, by observing them and determining suitable instruments for them. In preschool education programs, the focus is on the fact that children should be evaluated while performing various activities rather than a single activity and that development reports should be prepared through these evaluations. NAEYC ve NAECS/SDE (1991) recommend that the data as to the growth and development of each child should be collected, they should be systematically recorded and shared with the parents by means of the activity samples, performance explanations and anecdote records of children [12].

It is possible to see what the teachers think about measurement and evaluation instruments and to see the studies on how often they use these instruments in literature. These studies concluded that teachers have problems with choosing and using alternative measurement and evaluation instruments and grading [13, 14]; they have problems with shortage of time in measurement and evaluation process, overpopulated classes, lack of knowledge, students not fully understanding the objectives of measurement and evaluation and evaluating forms [15-18]; they prefer conventional methods [19-23].

In the study carried out by Can Gül (2009), the teachers stated that it is necessary to fill out the evaluation and the evaluation sections of the development check lists, portfolios, anecdote records and annual and daily lesson plans for an effective education [24]. There are also some studies in literature in which preschool teachers mentioned that they have difficulty in

determining how to make an evaluation while preparing daily plans [25]; they stated that although they exploit the samples of observation forms in the program they find these forms insufficient, there should be the samples of other techniques for getting to know and evaluating the children [26]; they emphasize that it is hard to make evaluation in the dimensions of teachers, children and the program (Cömert, 2003); they feel that it is unnecessary to make daily evaluations due to their excessive workload [27]. Scott-Little and Niemeyer (2001) point out that evaluation in preschool education period is hard due to such reasons as the fact that the development of children is sophisticated, fast and irregular, that children are not able to fill out usual tests and that children attend school with various experiences [28]. Brown and Rolfe (2005) conclude in the study they carried out with preschool teachers and preservice teachers that ease of use is the chief factor in choosing a measurement and evaluation instrument; the participants use more than one instrument and all of them prefer using check lists [29].

It is possible to meet studies aiming to determine how frequently subject matter teachers use different measurement and evaluation instruments and how proficient they are in using them [30-34]. However, these studies are generally at the level of primary and secondary education.. Findings of the study are important in this context. From this point of view, the aim of this study is to determine the perceptions of preschool teachers in measurement and evaluation instruments and the ones they used the most and the least frequently and the ones they find the hardest to use. So some answers to the following questions have been sought:

- At which level are the proficiency perception of preschool teachers in designing, implementing and grading measurement and evaluating instruments?
- What is the situation of teachers in terms of using conventional and alternative measurement instruments?
- What do preschool teachers think about the frequency of using measurement and evaluating instruments?

Method: Carried out through the teachers' opinions, the study has the characteristics of a descriptive study in terms of revealing the proficiency perceptions and usage level of preschool teachers in the conventional and alternative measurement instruments which they are supposed to use during education and training process.

Study Group: The study was carried out with the participation of 258 of the preschool teachers working in the province of Samsun taking such variances as what kind of the school they work in, how long they have been working and which district they work in.

Data Collection: The data of the study were collected by means of the survey developed by the researchers in order to determine the proficiency perspective of preschool teachers in measurement and evaluation instruments. The survey used in collecting the data was developed in consideration of the measurement instrument developed by Karakaya and Doğan (2008), the preschool teaching program and the literature. After the survey was developed, some changes were made in the survey according to the opinions of 3 experts in measurement and evaluation and of 1 expert in preschool education [31]. Thus the content validity of the measurement instrument was secured through expert opinions. The measurement instrument consists of two parts. In the first part there is such personal information as the age group the teachers work with, the kind of the school and gender. In the second part are teachers' proficiency perceptions of designing, implementing and judging measurement instruments, their opinions about the ones they use most frequently, they find most useful or most intricate etc.

Data Analysing: In the study, such descriptive statistics as frequency, percent, arithmetic average and standard deviation were employed in determining the preschool teachers' opinions about their proficiency level of designing, implementing and judging measurement instruments and their use etc.

RESULTS AND DISCUSSION

At Which Level Are the Proficiency Perception of Preschool Teachers in Designing, Implementing and Grading Measurement and Evaluating Instruments?:

The arithmetic average and standard deviation as to the proficiency perceptions of preschool teachers in alternative measurement instruments in the teaching program and in designing measurement instruments, using them in learning environment and evaluating them are provided below in Table1.

As illustrated in Table 1, it can be said that the proficiency level of teachers in designing, implementing measurement instruments and evaluating them by grading are in general between quite sufficient and

Table 1: Descriptive statistics of self proficiency perception level of teachers about measurement instruments

Measurement Instrument	The preparation phase		Implementation phase		Evaluation	
	Means	St.Deviation	Means	St. Deviation	Means	St. Deviation
1. Portfolio	4,09	0,92	4,02	0,94	4,00	0,88
2. Performance Task	3,70	0,90	3,59	0,95	3,72	0,95
3. Observation forms,	4,02	0,97	3,93	0,99	3,96	1,02
4. Anecdote records	3,94	0,99	3,78	1,02	3,82	1,01
5. Check List	3,95	1,02	3,76	1,08	3,85	1,01
6. Standard Test	3,40	1,14	3,33	1,11	3,33	1,09
7. Gap filling	4,16	0,86	4,02	0,93	4,07	0,94
8. Rubric	3,05	1,07	3,11	1,07	3,15	1,14
9. Grading scales	3,11	1,06	3,12	1,04	3,15	1,12
10. Worksheets	4,18	0,98	4,14	0,96	4,13	0,97
11. True-False	3,82	1,08	3,80	1,07	3,91	1,10
12. Open-Ended Questions	4,08	0,89	3,92	0,94	4,03	0,97
13. Conceptual maps	3,82	0,98	3,74	0,99	3,81	1,04
14. Event records	3,72	1,02	3,61	1,06	3,69	1,08

moderately sufficient. Among the measurement instruments the teachers are the most sufficient in designing, implementing and evaluating are worksheets, gap filling, open ended questions and portfolio the leading ones. The measurement instruments that the teachers are the least sufficient in designing, implementing and grading are graded scoring keys, grading scales, standard tests. It can be said it is notable that portfolio which is among the measurement instruments the teachers are the most sufficient in is sufficient in the least graded scoring key. This can be interpreted that teachers don't use graded scoring keys sufficiently in evaluating portfolios. Considering the measurement instruments the teachers are the most proficient in, they can be said to have similar level in conventional and alternative measurement instruments. These obtained findings partly contradict those of the study carried out by Doğan, Karakaya and Gelbal (2007) on the proficiency perceptions of primary education teachers in measurement instruments and their use [30]. In the study in question, it is seen that the teachers are more sufficient in conventional measurement instruments than the alternative ones in terms of designing, implementing and grading them. While it is seen that they have difficulty in alternative measurement instruments, it can be said that the preschool teachers in this study have similar level of proficiency perception in conventional and alternative measurement instruments. This can be accounted for the fact that it has been 5-6 years since the primary education and preschool education programs began to be implemented.

What Is the Situation of Teachers in Terms of Using Conventional and Alternative Measurement Instruments?:

The teachers were asked to define, among 14 measurement instruments given to determine how they use measurement instruments, 5 measurement instruments they use most frequently and find the most useful, the ones they have never used so far, the ones they have never heard of and the ones they have difficulty in using although they want to. The answers of the teachers are provided below in Table 2.

When Table 2 is examined, among the measurement instruments the teachers use most frequently are portfolio, observation forms, anecdote records, gap filling and check lists the leading ones. Among the measurement instruments the teachers find the most useful are gap filling, portfolios, observation forms, worksheets. Among the measurement instruments the teachers have never used or heard of are graded scoring keys and grading scales the leading ones. This finding shows similarity to the measurement instruments the teachers are the least sufficient in Table 1. In other words, it is seen that the measurement instruments that the teachers are the least sufficient, those they have never used and never heard of are the same. Among the measurement instruments the teachers have the most difficulty in are observation forms, anecdote records, check lists, graded scoring keys, grading scales and concept maps. This finding supports what Can Gül suggests [24]. It is seen that the measurement instruments which the teachers find the most difficult are those which must be carried out for each student and which take more time than the others. This finding obtained from the

Table 2: The situation of teachers in terms of using conventional and alternative measurement instruments

	MFU ¹		SMU ¹		NU ¹		NH ¹		HDU ¹	
	f	%	f	%	f	%	f	%	F	%
1. Portfólio	225	87	152	59	6	2	4	2	30	12
2. Performance Task	56	22	83	32	47	18	14	5	17	7
3. Observation forms,	214	83	146	57	7	3	1	0,4	47	18
4. Anecdote records	174	67	85	33	7	3	3	1	55	21
5. Check List	154	60	66	26	8	3	9	4	47	18
6. Standard Test	46	18	27	11	71	28	13	5	41	16
7. Gap filling	158	61	155	60	8	3	4	2	11	4
8. Rubric	8	3	14	5	173	67	68	26	44	17
9. Grading scales	14	5	21	8	148	57	57	22	44	17
10. Worksheets	146	57	135	52	21	8	12	5	5	2
11.True-False	62	24	47	18	37	14	13	5	9	4
12.Open-Ended Questions	111	43	121	47	18	7	7	3	11	4
13. Conceptual maps	71	28	59	23	59	23	7	3	42	16
14. Event records	49	19	45	17	65	25	11	4	26	10

¹MFU= Most Frequently Used SMU= Seen Most Useful NU= Never Used NH=Never Heard of HDU=Have difficulty in Using

Table 3: The opinions of preschool teachers about the frequency of using measurement instruments

	1		2		3		4		5		Means	St. Deviation
	f	%	f	%	f	%	f	%	f	%		
1. Portfólio	10	3,9	10	3,9	28	10,9	58	22,5	152	58,9	4,29	1,06
2. Performance Task	11	4,3	24	9,3	82	31,8	103	39,9	38	14,7	3,52	1,00
3. Observation forms	15	5,8	20	7,8	66	25,6	71	27,5	86	33,3	3,75	1,17
4. Anecdote records	19	7,4	29	11,2	104	40,3	41	15,9	65	25,2	3,40	1,19
5. Check List	27	10,5	37	14,3	103	39,9	43	16,7	48	18,6	3,19	1,20
6. Standard Test	44	17,1	42	16,3	116	45	38	14,7	18	7	2,78	1,11
7. Gap filling	9	3,5	10	3,9	51	19,8	70	27,1	118	45,7	4,07	1,06
8. Rubric	54	20,9	58	22,5	106	41,1	27	10,5	13	5	2,56	1,09
9. Grading scales	50	19,4	54	20,9	101	39,1	33	12,8	20	7,8	2,69	1,15
10. Worksheets	11	4,3	10	3,9	56	21,7	76	29,5	105	40,7	3,98	1,08
11.True-False	14	5,4	24	9,3	90	34,9	69	26,7	61	23,7	3,53	1,11
12.Open-Ended Questions	14	5,4	8	3,1	49	19	64	24,8	123	47,7	4,06	1,13
13. Conceptual maps	15	5,8	27	10,5	71	27,5	63	24,4	82	31,8	3,66	1,20
14. Event records	23	8,9	21	8,1	87	33,7	67	26	60	23,3	3,47	1,19

1= No need to use, 2= Very rare to Use, 3= Occasion to use, 4= Often to Use and 5= Always to use

study shows that the teachers prefer and frequently use mostly the measurement instruments that they have the least difficulty in as Brown and Rolfe pointed out. Besides, it is seen that these findings obtained in the study in compliance with the studies carried out by Pretti-Frontczak, Kowalski ve Douglas Brown [35].

What Do Preschool Teachers Think about the Frequency of Using Measurement and Evaluating Instruments?:

To get the answers to the third question, the opinions of preschool teachers about the frequency of using measurement instruments were obtained and they are provided below in Table 3.

As illustrated in Table 3, it is emphasized that portfolios, gap filling, worksheets and open ended questions should be used the most frequently in the light of the opinions of preschool teachers about the frequency of using conventional and alternative measurement instruments in learning environment. According to the teachers' opinions, the measurement instruments which should be used the least frequently are standard tests, graded scoring keys, grading scales and check lists. Considering the teachers opinions, it is portfolio which is recommended to be used the most frequently while it is graded scoring keys and grading scales which are the least recommended, which appears to be a contradiction.

CONCLUSION

The results obtained from this study, aiming to determine the proficiency perceptions and usage level of preschool teachers in designing, implementing and evaluating the conventional and alternative measurement instruments and to what extent they employ these instruments, are: it was seen in the evaluation of the first sub-problem that in terms of designing, implementing and evaluating the conventional and alternative measurement instruments, the preschool teachers are the most proficient in worksheets, gap filling, open ended questions and portfolios and the least proficient in graded scoring keys, grading scales and standard tests. The teachers use most frequently, portfolios, observation forms, anecdote records, gap filling and check lists in their classrooms however hard they find them. The teachers stated that gap filling, portfolios, observation forms, worksheets are the most useful ones for school teachers. Because the teachers use performance tasks less than the other instruments while they the most frequently use portfolios which is among alternative measurement instruments, it is of significant to practically and theoretically train teachers in performance tasks, which provides teachers with significant data about advanced behaviors especially in determining students' tasks. Considering the opinions of the teachers about the usage frequency of measurement instruments, they stated that portfolios, gap filling, worksheets should be used more while graded scoring keys and grading scales should be used the least. In the light of these opinions of the teachers it can be recommended that the teachers should be provided in service trainings in graded scoring keys and performance tasks which have an important place in especially alternative measurement instruments.

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