



## THE EFFECT OF OBJECT STUDIES DONE WITH PRESCHOOL TERM CHILDREN IN TURKEY TO REASONING SKILLS

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### Abstract:

The aim of this study is to determine whether preschool term of 6 years old children's objects at their around changing of characteristic feature related to what they stand in good stead, efficiency depend on their ideas, having an impact on their reasoning skills or not. The study is designed at experimental design. Efficiencies of object oriented prepared by researcher are conducted by researcher at experimental group. As a result of the analysis: it is determined that there is a significant difference on behalf of experimental group in terms of reasoning skills both inductive and deductively about problems needed to think in a different situation from normal state of things had information or inductive experience in problems related to subjects had information or experience, in terms of attention skills and reasoning skills. It is determined that there is no significant difference among groups in problems needed to think others' concerns.

**Keywords:** reasoning, inductive, deductive, attention skills, preschool term

### 1. Introduction

Children gain basic knowledge and skills that will support what they will learn ensuing years, at preschool years, learn thinking and understanding (Gürkan, 2008). They improve inborn powers, talents and mental acts within the bounds of possibility given postnatal (Düzce and Cinel, 2006). Therefore, families and preschool education institutions shoulder responsibility in these periods (Turla, 2006).

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Inborn curiosity of the child provokes his/her desire to learn through natural ways. The child always questions to satisfy his/her curiosity and tries to understand what is going on around him/her (Unutkan, 2006). Commensally of the child's immense curiosity, it is extremely important that scientific thought skills required having human of 21st century like deduction, induction, problem solving, cause and effect relationship to support at preschool period (Unutkan, 2006).

Preschool classrooms give children regular opportunities to interact socially with teachers and peers and to engage with tasks. However, children may not engage in high-quality experiences evenly across the preschool day. Basic elements of classroom organization, including teachers' use of different activity settings, may be associated with children's frequency and quality of engagement with tasks and social partners (Kontos & Keyes, 1999; as cited in Vitiello, Booren, Downer and Williford, 2012).

Pars and his friends (n. d.) indicate that reasoning is the most difficult ability that human have among the adaptabilities and has a positive way of thinking arriving resettle connectively his experiences. Baymur (1985) emphasizes that information increase, become widespread and deepen as a means of reasoning.

Attention skill has a great importance on the child's noticing substantial thing whatever it is and whichever it is, arguing its features himself and reaching the information. Ettrich (1998; as cited in Yaycı, 2007) indicates that mental development of person, his age and personal characteristics play a significant role in process of gathering attention. As to Davies and Parasuraman (1982; as cited in Yaycı, 2007), the age variable affects attention more than gender.

In recent years, there has been a notable shift in the field of early childhood education. Debates about how children learn and how best to teach them have taken a back seat to debates about what children should be learning during the preschool years. The school readiness movement has challenged the early childhood field to consider what knowledge and skills children need to learn in order to be adequately equipped for a successful transition into kindergarten (Barbarin and Wasik, 2009; Pianta, Cox, and Snow, 2007; as cited in Fuligni, Howes, Huang, Hong and Cinisomo, 2012).

In the view of such information, we think that this study is important supporting of attention and reasoning skills for children. Contributing of these skills for children, directing their attention to situations children can encounter at all their life, seeing these situations from a different perspective, determining skills of proper idea and behavior and we may support them for using.

## 2. Preschool Education in Turkey

Although people realized the importance of preschool education in Turkey at very old times, this subject has not come true in long process due to several challenges.

More permanent and big steps have started after 1961 that publication of the law no 222. In 1989 by the General Directorate of Primary Education, with the aim of helping to the teachers, each improvement field, the government formed related aims and behaviors to practice of preschool trial program, at prepared program sample for 4-5 aged children by considering improvement features of this age group. But this program is point to be a subject based frame program. The General Directorate of Preschool Education that found in 1992 with the participation of universities and other related institutions and organizations of different age groups has started to work to develop a program appropriate to the level of development in 1994-1995 school years. With the introduction of the new curriculum, in the schools of the Ministry of National Education, across the country, government abandoned subject matter centered curriculum approach and developed a framework curriculum based on child-centered active learning principal for the first time. The curriculum is based on multi-faceted development of children aged 0-6 and gaining them that the basic behaviors (Oktay, 2002). In the Preschool Curriculum for 3-6 aged children in 2002, The Ministry of National Education indicated that the program developed in the academic year 1994-1995 was put into practice to be tried and developed and the feedback received from researches and practices shows that when teaching the subject teachers give importance to teaching the subject and they didn't focus the targets and expected behaviors enough. So, Day Care Centers Curriculum aimed at 0-36 months children wasn't changed, Kindergarten and Nursery Classes Curriculum was put into practice to be retried and developed by rearranging. For the preparation of the curriculum, modern curriculum development approaches and psychology theories accepted. Earlier experiences of teachers considered, too. Also, it is aimed for children to be sensitive to for human rights, democracy and other cultures (MNE, 2002).

In the Preschool Curriculum for 36-72 Month Children prepared by the Ministry of National Education, which had been implemented since 2002-2003, revised, necessary corrections were made and developed version is presented in the direction of the feedback received from experts and practitioners, modern curriculum development, development and learning theories, the changing education needs of the society and the principles, approaches and characteristics adopted in the new elementary curriculum. The last shape of the curriculum is 'progressive'. In other words, it is based on developing overall development areas of child. As understanding curriculum, it is

holistic, but it is spiral as curriculum approach, too. This developed curriculum, when resolving the developmental needs, aims to maximize, enrich and diversify the behaviors of child in the all areas of development. Here there are main features of the curriculum: it is child-centered, flexible, allows freedom to teachers, creativity is in foreground, problem solving and games are main activities, diversification of learning experiences is important, evaluation process is sophisticated and it is opened to be developed (TTKB, 2006).

In the Pre-School Education Expansion, themed circular of the Ministry of National Education General Directorate of Preschool Education in 15/ 06/ 2009, The Ministry of National Education indicated the importance of pre-school education consistently and mentioned what can be done to extend pre-school education on the highest point as soon as possible.

Considering all these steps it is seen that we understand the importance of pre-school education undisputedly and try the progression for the sake of the usage of the opportunities available and creation of new opportunities for the extension of pre-school education properly.

### **3. Reasoning**

Student should discover information, skills, perception and feeling, use and re-create in reasoning (Sönmez, 1998). We may discuss reasoning as deduction, induction, analogical, dialectical, axiomatic, hypothetical-deductive, retroductive, working-backwards, fuzzy-logic (Sönmez, 2006).

In this study, we aimed the development of reasoning skills in deductive and inductive forms which are forms of reasoning. Induction means a consideration pieces to entire, particular to plenary (Jersild, 1979). It also approaches samples to rules, reaches to general attitudes after researching small cases... (Gövsa, 1998). True propositions about facts obtained from the individual object and goes to the general proposition (Sönmez, 2006). The information here will be many hints are given before (Sönmez, 1985). So, we obtain new information and rules. Perception has major role here... This kind of case that is important in argument is the path to the general rules by examining specific events. In scientific researches, people use this method very often (Baymur, 1985). It aims obtaining the law from separate cases (Tan and Erdoğan, 2004). The obtained rule via induction is at the end of thought at issue (Binbaşıoğlu, 1981).

Reasoning by deduction is; to conclude results from a general attitude for specific cases, the general rule and exceptions to the implementation of laws is to obtain

new information (Baymur, 1985). In deduction, a person passes to a singular statement from a plenary statement that proven by middle term.

The transfer of information to a new case such as searching reasons doesn't exist in this mental process (Sönmez 2006). In this pattern a known, a taught principle is that by applying various cases reduced from general to the specific (Sönmez, 1985). Thus, according to the rules of something general about whether the mind reaches the conclusion without the need to experiment (Binbaşıoğlu, 1981). Deduction is a proof method (Binbaşıoğlu, 1974: 169; 1981). It aims to approach more specific obligations into conclusions based on general provisions or principles of the mind accepts as fact and law or rules, (Tan and Erdoğan, 2004).

#### **4. Attention**

The most common meaning of attention is "focus of mental activity". In the structure of attention, there is a mental arousal case and selection operation. Mind is ready to take stimulants from outside, realizes stimulants and for the purpose of facing the mind selects all the large amounts of stimulants (Öztürk, 1999).

A child should pay attention to the act for standing the act he started as himself or with an escorting adult. A child should point the act that is mentioned by wondering and needing.

To obtain continuousness of attention is as important as to attract attention. Distractive things block to labor with the act and to experience about the act of the child. So, activities that teachers will organize should be both remarkable quality for children and activities should obtain continuousness of attention.

In studies, very good known objects of children have been remarkable as seeing different features that they know and used to. They have needed to pay attention for discovering of objects how to deform from real forms. For continuousness of attention, during activity the stimulants have prepared which can be needed and exploited from consisted chances in needed times. Also, we have paid attention to time in this subject. Activities have continued mainly until children continue the activities by their own control and unless they got bored.

#### **5. The Aim of Research**

In this research, we tried to define whether the activities prepared as based on the modification of the characteristics of the objects around children contribute to children's

reasoning skills through inductive and deductive or not. In addition, it has been tried to answer the following questions:

1. Is there a difference between the ways of reasoning which they use to solve the problems they experience and they do not have enough experience problems while generating solution ways?
2. Is there a meaningful difference between reasoning skills of control group and experimental group?
3. Is there a meaningful difference between attention skills of control group and experimental group?

## **6. Method**

We designed this research and applied for pretest- posttest control grouped model in experimental design. According to model, the researcher asked the questions that she had prepared and 2 sections of Wechsler's Intelligence Scale that are Reasoning Skills and Attention Skills to the students both in the control and in the experimental group before the applications. After that the experimenter applied prepared activities during ten weeks to the experimental group, but in control group, own teachers of the students continued traditional education. At last the experimenter repeated the operation which she had done at the beginning of the studies, the experimenter did posttest application and study finished.

### **6.1 Study Group**

The experimenter performed this study at kindergartens of 8 primary school of Ministry of National Education by random selection. 200 students have joined the study contained experimental group included 100 students who continued preschool education and 6 aged and control group included 100 students who continued preschool education and 6 aged. The experimenter assigned students as experimental and control group as random.

### **6.2 Data Collection Tools**

In this study, the experimenter used the related parts of intelligence scale prepared by Wechsler to the research and questions prepared by the experimenter.

Before application the experimenter asked questions prepared by her to 60 children who are 6 aged except experimental and control groups and the experimenter found alpha coefficient to set reliability of the scale. The experimenter removed the

questions that effect reliability. After this operation the experimenter identified the alpha coefficient of the scale as 0,66 and to apply.

Piaget indicated that child reasoning is considerably different from ours. In his studies about this subject, he has discussed the problem "How to begin research of logical dependence of children?" and submitted two approaches to answer to this problem. One of these is to direct child to use as had causation and logical relation prepositions. The second one is to save all sentences which have prepositions that the child said and used (Piaget, 2007a).

In this study, the experimenter used the first method and desired students to specify reasons of the answer after answering the questions. By this method, the experimenter separated the questions prepared by her into three parts. Five questions existed in each part. For preparing questions, the experimenter paid attention to probability of having experience of children only. Other questions are not directive to reasoning through deduction or induction. It is completely up to the child using which method for explanation.

### **6.3 Operation**

The experimenter did the activities prepared by her based on objects with experimental group, and teachers continued traditional education in control group. The experimenter did the study with experimental group has maintained in the time of teachers of the classes approved, formed maximum 40 minutes activities, one day for a week, during 10 weeks. In studies the experimenter selected the most characteristic features of materials around children and modified them: pulled the hair of toothbrush off, flattened the gutter of soup spoon, removed the buttons of remote control, removed the part of pencil for writing, removed the bottom of a plastic glass, removed the mirror of a framed mirror, cut the parts of plastic bag for holding, removed the cutter part of a scissor which has holding parts, sewed the mouth part of a sock, cut the teeth of a comb. The experimenter showed one material in this form each week and asked children for reasoning about this form how to work. The children have submitted different things by themselves and also hearing ideas of each other.

### **6.4 Analysis of Data**

The experimenter analyzed the obtained data through SPSS 15.00 package programme (2006). Independent t-test is used at analysis.

## 7. Findings

### A. Levels of Experimental and Control Groups In Terms of Reasoning Skills before Studies (Pretest)

**Table 1:** T-test Results of Children of 6 Years Group Related to Pretest Points

Group	N	$\bar{x}$	S	Sd	t	p
Experimental Group (WISC-R)	100	8,87	2,89	198	,046	,963
Control Group (WISC-R)	100	8,89	3,21			
Experimental Group (ATHS)	100	16,02	7,88	198	-1,9	,059
Control Group (ATHS)	100	14,88	5,63			
Experimental Group (picture)	100	5,45	3,69	198	,259	,796
Control Group (picture)	100	5,58	3,38			
Experimental Group (shape)	100	14,69	12,54	198	,082	,935
Control Group (shape)	100	14,85	14,89			
Experimental Group (T.V.) Section 1	100	,88	1,20	198	-,065	,949
Control Group (T.V.)Section 1	100	,87	,97			
Experimental Group (T.G.) Section 1	100	2,18	1,50	198	-2,872	,005
Control Group (T.G.) Section 1	100	1,62	1,23			
Experimental Group (T.V.) Section 2	100	,59	,76	198	-,300	,764
Control Group (T.V.) Section 2	100	,56	,64			
Experimental Group (T.G.) Section 2	100	1,01	,96	198	-,727	,468
Control Group (T.G.) Section 2	100	,91	,97			
Experimental Group (T.V.) Section 3	100	,96	1,01	198	-3,347	,001
Control Group (T.V.) Section 3	100	,55	,68			
Experimental Group (T.G.) Section 3	100	,42	,66	198	-,908	,365
Control Group (T.G.) Section 3	100	,34	,57			

(p<.05)

The Table 1 includes the results of t-test is included belonging to points received from experimental group and control group in pretest practice. When we examine the results of t-test, the students of experimental and control group;

- We see that there is no significant difference between the averages of total points from pretest of Reasoning Skills WISC-R.
- We see that there is no significant difference between the averages of total points from pretest of questions prepared by researcher.
- We see that there is no significant difference between the averages of total points from pretest of deficiency founds study at pictures from the Section of Reasoning Skills WISC-R.

- We see that there is no significant difference between the averages of total points from pretest execution of pattern completion study from the Section of Reasoning Skills WISC-R.
- We see that there is no significant difference between the averages of total points from answers containing reasoning of expression at inductive in pretest practice of section 1 in questions prepared by researcher.
- We see that there is a meaningful difference on behalf of experimental group between the averages of the points from answers contained reasoning of expressions deductively in pretest practice of section 1 in questions prepared by researcher ( $p<05$ ). Consequently, the experimenter did the analysis of covariance from points of this section. Findings and observations belonged to analysis of covariance is included in section of the analysis of points in posttest practice.
- We see that there is no significant difference between the averages of the points from answers contained reasoning of expression at inductive in pretest practice of section 2 in questions that the experimenter prepared.
- We see that there is no significant difference between the averages of the points from answers contained reasoning of expression deductively in pretest practice of section 2 in questions prepared by researcher.
- We see that there is a significant difference on behalf of experimental group between the averages of the points from answers contained reasoning of expressions at inductive in pretest practice of section 3 in questions that the experimenter prepared. Consequently, the experimenter made the analysis of covariance from points of this section. Findings and observations belonged to analysis of covariance is included in section of the analysis of points in posttest practice.
- We see that there is no significant difference between the averages of points from answers contained reasoning of expression deductively in pretest practice of section 3 in questions prepared by researcher.

## **B. Levels of Experimental and Control Groups in terms of Reasoning Skills after Studies (Posttest)**

**Table 2:** T-test Results of the Experimental and Control Groups' Points Received from Reasoning Skills Section of WISC-R

Group	N	$\bar{x}$	S	Sd	t	p
Experimental Group Posttest (WISC-R)	100	13.36	4.04	198	-6.64	.000
Control Group Posttest (WISC-R)	100	9.67	3.80			

(p<.05)

When we analyzed Table 2, we see that there is a significant difference on behalf of experimental group between experimental group and control group according to points received from Section of Reasoning Skills WISC-R in posttest practice.

**Table 3:** T-test Results of the Experimental and Control Groups' Points Received from Attention Skills Section of WISC-R

Group	N	$\bar{x}$	S	Sd	t	P
Experimental Group (picture)	100	7.69	4.04	198	-2.08	.038
Control Group (picture)	100	6.53	3.81			
Experimental Group (shape)	100	24.24	16.88	198	-2.21	.027
Control Group (shape)	100	19.03	16.27			

(p<.05)

When we analyzed Table 3, we see that there is a significant difference on behalf of experimental group between experimental group and control group according to points received from Section of Reasoning Skills WISC-R from studies of find lacking at pictures, and there is a significant difference on behalf of experimental group between experimental group and control group according to points received from Section of Reasoning Skills WISC-R from studies of completing shape in posttest practice.

**Table 4:** T-test Results of the Experimental and Control Groups' Points Received from Section 1 of the questions prepared by the researcher

Group	N	$\bar{x}$	S	Sd	t	p
Experimental Group (T.V.)	100	1.61	1.29	198	-2.759	.006
Control Group (T.V.)	100	1.12	1.21			
Experimental Group (T.G.)	100	1.81	1.49	198	-2.002	.047
Control Group (T.G.)	100	1.42	1.24			

(p<.05)

In Table 4, Section 1 of questions prepared by researcher is included posttest finding belonging to problems related to subjects had information or experience of children. When we analyze the results, we see that there is a significant difference on behalf of experimental group between points and their averages from received answers included

reasoning of expressions inductive, and there is a significant difference on behalf of experimental group between points and their averages from received answers included reasoning of expressions deductively ( $p < 0.05$ ), section 1 of questions prepared by researcher of experimental group and control group students in posttest practice. However, we see that there is a significant difference on behalf of experimental group at averages of points received from answers included expressions of reasoning deductively, section 1 of questions prepared by researcher of experimental group and control group students in pretest practice, too. Therefore, we made the covariance analysis of the data in this section.

**Table 5:** Averages and Corrected Posttest Points of Experimental Group and Control Group Received From Section 1 of the Questions Prepared by Researcher

Groups	N		Points	Corrected Posttest Point Averages
			$\bar{X}$	$\bar{X}$
Experimental Group	100	Pretest	2.18	1.79
	100	Posttest	1.81	
Control Group	100	Pretest	1.62	1.43
	100	Posttest	1.42	

When we analyze Table 5, we see that corrected posttest point averages ( $\bar{X}=1.79$ ) of points received experimental group from answers included expressions of reasoning deductively in section 1 of questions prepared by researcher is higher than corrected posttest point averages ( $\bar{X}=1.43$ ) of control group.

**Table 6:** Results of Covariance Analysis of Points of Control Group and Experimental Group Received from Section 1 of Questions Prepared by Researcher

Source of variance	Sum of Squares	Sd	Quadratic Mean	F	p
Controlled Variable	1.215	1	1.215	.639	.003
Pretest					
Group	6.158	1	6.158	3.239	.016
Error	374.535	197	1.901		
Corrected Total Point	905.000	200			

( $p < .05$ )

When we analyzed table 6, we see that there is a significant difference on behalf of experimental group between corrected posttest points and their averages of points received from the answers included expressions of reasoning deductively in section 1 of questions prepared by researcher of control group and experimental group, when pretest points are controlled, as a result of covariance analysis.

However, it is fail to reach to a significant difference in its entirety with points received from answers included expressions of reasoning deductively according to findings obtained at analysis of points received from answers included expressions of reasoning deductively and inductive in section 1 of questions prepared by researcher of experimental group. With these results, it is acceptable that it is no reasoning deductively in arguments related to the question form in section 1, it contributes to developing reasoning inductive in this study done with experimental group.

**Table 7:** T-test Results of Control Group’s and Experimental Group’s Posttest Points Received from Section 2 of Questions Prepared by Researcher

Group	N	$\bar{x}$	S	Sd	t	p
Experimental Group (T.V.)	100	.86	1.08	198	-3.896	.000
Control Group (T.V.)	100	.36	.68			
Experimental Group (T.G.)	100	1.47	1.30	198	-3.095	.002
Control Group (T.G.)	100	.96	1.00			

(p<.05)

We conclude that posttest findings belong to problems needed to think differently from normal state of situations had information or experience, in short, section 2 of questions prepared by researcher in Table 7.

When we analyzed t-test results, we see that there is a significant difference on behalf of experimental group between the averages of the points from received answers included reasoning of expressions deductively, and there is a significant difference on behalf of experimental group between the averages of the points from received answers included reasoning of expressions inductively, section 2 of questions prepared by researcher of experimental group and control group students in posttest practice. With these results, it is acceptable that contributing to both reasoning skills deductively and reasoning inductively from reasoning skills related to question form in section 2 of study done with experimental group.

**Table 8:** T-test Results of Control Group’s and Experimental Group’s Posttest Points Received from Section 3 of Questions Prepared by Researcher

Group	N	$\bar{x}$	S	Sd	t	p
Experimental Group (T.V.)	100	1.76	1.30	198	-4.478	.000
Control Group (T.V.)	100	1.03	.97			
Experimental Group (T.G.)	100	.74	.91	198	-1.013	.312
Control Group (T.G.)	100	.61	.89			

(p<.05)

Table 8 includes posttest findings belong to problems needed to think about others' concerns, in short, section 3 of questions prepared by experimenter.

When we analyzed t-test results, we see that there is no significant difference between the averages of points from received answers included reasoning of expressions deductively, and there is a significant difference between the averages of points from received answers included reasoning of expressions inductive, section 3 of questions prepared by researcher of experimental group and control group students in posttest practice.

However, we see that there is a significant difference on behalf of experimental group at averages of points received from answers included expressions of reasoning inductive, section 3 of questions prepared by researcher of experimental group and control group students in pretest practice, too. Therefore, we made data analysis of covariance in this section.

**Table 9:** Averages and Corrected Posttest Points Averages of the points of Experimental Group and Control Group Received from Section 3 of the Questions Prepared by Researcher

Groups	N		Points	Corrected Posttest Point Averages
			$\bar{x}$	$\bar{x}$
Experimental Group	100	Pretest	.96	
	100	Posttest	1.76	1.76
Control Group	100	Pretest	.55	
	100	Posttest	1.03	1.02

When we analyzed Table 9, we see that corrected posttest point averages of points received experimental group from answers included expressions of reasoning inductive in section 3 of questions prepared by researcher ( $\bar{X}=1.76$ ) is higher than corrected posttest point averages of control group ( $\bar{X}=1.02$ ).

**Table 10:** Covariance Analysis Results of Points of Control Group's and Experimental Groups' Received from Section 3 of Questions Prepared by Researcher

Source of variance	Sum of Squares	Sd	Quadratic Mean	F	p
Controlled variable	.046	1	.046	.034	.000
Pretest					
Group	25.719	1	25.719	19.257	.089
Error	263.104	197	1.336		
Corrected total point	679.000	200			

(p<.05)

When we analyzed Table 10, we see that there is no significant difference between corrected posttest points and their averages of points received from answers included expressions of reasoning inductive in section 3 of questions prepared by researcher of control group and experimental group, when pretest points is brought under control, as a result of covariance analysis.

With these results, we deduced that the study we had done with experimental group contributed neither to the argument skills deductively nor to the reasoning skills inductive in arguments related to question forms in section 3.

## **8. Discussion**

We presented the objects around children, which they know so well, to children with differentiation that they can't use the objects according to their general purposes. Thus, children focused their attention on the object at first and tried to determine the difference. Then they thought up the idea of how the object can be used and it is used for which purpose. Within this period, children tried to visualize the different circumstances and made an effort to express their thoughts orally. After this period with using these steps, their reasoning skills and attention skills improved, we determined that there is a significant difference on behalf of experimental group in terms of reasoning skills both inductive and deductively about problems needed to think in a different situation from normal state of things had information or experience in problems related to subjects had information or experience, in terms of attention skills and reasoning skills. We determined that it didn't contribute to both reasoning of two inductive and deductively in problems needed to think about others' concerns.

The conclusion of this episode is that studied with the problems needed to think about others' concerns, has similar qualities with the findings of Pillow's (2002) study. In Pillow's study, he concluded that while children up to age 10 judge the others' knowledge they can't separate rational inferences and irrational inferences from each other. Also as Piaget stated that reasoning skills of children is different from adults, and this difference mostly fed from the child's egocentric thought and is parallel with the information that the child cannot get involved in the point of view of the other one's like an adult (Piaget, 2007b).

## **9. Conclusion**

We think that it reaches to positive results accepted as a result of this study we did thinking of has positive acquisitions to a person both all his life and in his current

term intended to developing of reasoning skills, when fast and important developments are thought of a person at preschool term.

Presenting things different from ordinary is both attentions getting and thinking different things and producing an idea for children. The results of analysis; we deduced that reached to the result of contributing to attention skills and reasoning skills of children in their cognitive enhancement. We concluded that determiners by researcher from this period due to this subject to their development as a result of mental process while tackling problem with creating awareness.

It is thought that this study is obtrusive for children and making sensation about objects differently for them, have an opportunity for exploitation from ideas of each other, have to dissent about an object a different from ordinary. There was neither economically nor timely difficulties to create in such cases during studying. In that case, making such efficiencies is not difficult for the teacher. Besides, this contributes to attention skills and reasoning skills of children.

We find it interesting that children are interested in studies done with objects as well as questions prepared by researcher in pretest and posttest. Some children requested asking a question similarly to the researcher during posttest practice. It has seen that children asked and put questions quizzical about their around. For example; What can I use in the rain except for umbrella?, How do I watch TV if there isn't an antenna on the roofs of houses?, Why do corvine birds walk on the water?

However, we didn't collect data about reaction getting from children because it wasn't preplanned at this study. As far as observed, such questions got children attention and the children liked to concern different things about thinking. This case aroused the idea of some studies that will be done about it.

Consequently, it should be supported to cognitive enhancement due to make a decision which information is useful for a person and to get and formalize this information in his/her own way and to use it properly in this day and age have an information spread like wildfire. So, when we examine research result, we think that contribution for strengthening of these skills in cognitive enhancement for peaking potential in terms of reasoning and attention skills in future with developing rapidly at preschool term of children's such efficiencies it should not ignore shouldn't be ignored.

## **10. Suggestions to Future Research**

We see that studies in terms of reasoning of children at preschool term are few in researches conducted. Especially, there are a few studies about reasoning inductive and deductively. Therefore, it can contribute these researches that will be done aimed at

these subjects. Moreover, analogy which is a kind of reasoning courted and used extremely at preschool term left out at this study. So, it can contribute to studies with regard to reasoning at preschool term for emphasizing to analogy at studies that will be done with regard to reasoning.

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