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THE EFFECT OF THE GAME ACTIVITIES AND USE OF TECHNOLOGICAL DEVICE IN PRESCHOOL PERIOD ON GAINING OF NEW WORDS AND CONCEPTS

abstract

In this study, the experimental design is used to analyze the teaching process of new words by the game activities and technological devices for the children in 5-6 age group. The program that involves using of technological tools enriched by the games is used as the data collection tool. Data obtained is evaluated by SPSS packaged software, and the significant difference between the groups and the results of other studies are interpreted.

key words

Preschool education, Game activities, Technological devices, Word, Concept.

öz

Okul Öncesi Dönemde Oyun Etkinlikleri ve Teknolojik Araç Kullanımının Yeni Kelimeler ve Kavramlar Kazanımına Etkisi

Anasınıfına devam eden 5-6 yaş grubu çocuklara oyun etkinlikleri ve teknolojik araçlar kullanımıyla yeni kelimeler, kazandırılmasını incelemek amacıyla deneysel desen kullanılan, örneklemini, Sakarya'da aynı anaokuluna devam

eden seçkisiz örnekleme ile eşit sayıda ($n=15+15$) belirlenen 30 çocuğun oluşturduğu araştırmada, veri toplama aracı özel olarak oyunlarla zenginleştirilmiş teknolojik araçların kullanımını içeren program uygulanmış, ulaşılan veriler, SPSS paket programıyla ortaya çıkan analiz bulguları ışığında iki grup puanları arasındaki anlamlı farklılığın ve bu konudaki diğer araştırmaların sonuçları yorumlanmıştır.

anahtar kelimeler

Okul öncesi eğitim, Oyun etkinlikleri, Teknolojik araçlar, Kelime, Kavram.

Introduction

The human has been in need of knowing, understanding and explaining the world outside, not just oneself since taking to the stage of history. This situation necessitates us to see him as a being looks for the meaning on an individual and social basis. The course of the life of a person in each society is finished in the social structure encircled by social and cultural primary factors direct the three significant phases as childhood, youth and elderliness (Çapcıoğlu, 2015: 57-59). The first five years of life is the period when the child grows rapidly and has a high learning capacity besides needing love and interest at maximum. This period also shows how important are the effects of family environment, preschool educational establishment, inner circle and communication instruments (Oktay 1990; 151).

The family environments where the necessity and development level of the child are considered, tolerance, sympathy, and restrictions are at balance are essential for improving children. The actual ambient conditions support the development of individual positively while being these conditions adverse may prevent the development by several aspects. The relations of the person with immediate vicinity shapes the perception of him about world and himself. Intensively continuing of the socialization process starts from the childhood of the individual makes him reach to social maturity (Çapcıoğlu, 2015: 69-73). The factors have a special place in this first period of life are language learning, expression skills, communication and understanding the will of others (Mialaret 1977: 8).

The preschool education that underwent age level changes within last five years is firstly defined by the Ministry of Education in 14th National Education Council in 1993 as the training process fits for the development level and personal characteristics of the children in 0-72 month group, provides rich energizers and environment opportunities, supports their physical, mental, emo-

tional and social developments, motivates them in line with the cultural values of the society, prepares them for the primary education (Çakır, 2017: 2048; Tosun and Çapcioğlu, 2015: 706).

‘Providing children to speak Turkish clean and well’ is in the purpose and missions of Preschool Education 2006 program in compliance with the general targets and principles of national education (MNE, PSEP, 2006:10). In this same program, eight objectives are set about language domain under the title of purposes and gains determined for the education of 36-72 month children. The 8th goal is ‘to be able to read the visual materials.’ These materials involve the pictures, figures, and decorations, photographs, tables, sculptures, graphics and schemes in the books. The activities to explain what a scheme, graphically belongs to, what they show, which of the lines and column are much or few are defined as the activities required to gain the purpose of reading visual materials (MNE, PSEP, 2006: 38-39).

The leading expert, Mialaret who was in charge of World Preschool Education Organization, stated the purposes of preschool education accepted in each country as; social purposes, the purposes of the child development, educational purposes (language-communication, improving the sense organs and environmental awareness) (Mialaret, 1977: 11).

It is pointed out by the philologists and educators as the result of the literature review that the natural cognitive capacity of the person is effective to gain the language and environment experiences should improve this function.

The preschool education increases the improvement of the emotions of a child and the perceiving power as well. This education helps children during the reasoning process and provides them to adopt the cultural values of the society (Şahin, 2000: 11). It is stated in literacy progress in preschool period researches of (Morrow, Mandel, and Jeffrey (1990), Taylor, Strickland (1986), Teale, Sulzby (1986) that copiousness is a significant factor for children to be literate after the school period. Being benefited from several method and techniques together to bring children new words and also used the technological devices effectively to make the educations permanent are essential to improve the preschool period.

Becoming popular of the technology in houses and offices provide children to make acquainted with the technology at early ages. In our country, the training technologies have started to improve since 1984. The training techniques have also been in place in programs in each stage of education since the early of the 1990s (Akkoyunlu, 2002).

All technological devices, notably the computer, telephone, telecopier,

printer, projection, overhead projector, photograph machine, the recorder can be utilized in every education stage. Various stimulants such as the image and sound are provided via technological devices. It is determined that the training environments where benefit from technology provide more achievements for children in comparison with the environments use technology less (Mayer, 2003).

Reading process has two elements. These are; recognizing and understanding the words read. Children identify the words by considering their meanings and pronunciation. Understanding of language by the children helps them for reading and writing skills in the future (Barbour, 1992; Cited by Yazıcı, 2001: 405-414). Dodge, Colker and Heroman (2002) emphasized the importance of bringing children in new words in preschool period while learning to read and also mentioned that the educators should create opportunities to enrich the wordrobe of children through contentful activities by collaborating with the parents. The game affects the psychomotor, social and emotional development of the children besides impacting and supporting the mental progress. The children learn the environment and a lot of characteristics and realities of the society via games. The game enables the kid to know things around him and solves problems. The children get several cognitive achievements such as matching, classifying, analyzing, synthesizing many concepts like size, color, dimension, weight, time and space (Seyrek and Sun, 1991:57).

In our era, the information and communication technologies influence the lives of people and the society deeply. The computer as an electronic device can store the information and retrieval them when we want, the projection as an electronic device provides an ambience where everyone can easily see the monitor during educations in convention facilities and seminar halls, the digital video disks which movies, text, or images are recorded on, video watched, overhead projectors as the technological lesson instrument reflects the colored or black white information on transparencies pre-prepared to the wall, board or the curtain by enlarging are the technological devices utilized in activities in preschool educational establishments.

Also, being used these technological tools so as to form the interaction between teacher and the students support the social and emotional development (Gimbert, Cristol, 2004). Such a study is planned concerning the thought of being used the technological devices contribute children to learn new words in the preschool period.

Research Objective

Analyzing the impact of game activities and technological devices on learning

new words (wordrobe, strainer, sieve, tray, stove, sandal, shoe, loose robe, embroidery, pique, pancake, telescope, peg top) for the children in 5-6 age group in nursery classes.

Method

The experimental model is used in research to analyze the effect of technological devices (computer, projection, DVD, music center, overhead projector) on teaching new words.

The experimental model is a research field produces the data wanted to be monitored to explore the cause-effect relationship between the variables under the control of the investigator (Büyüköztürk, 2001; Karasar, 2005). Investigators observe the effects of at least one variable on the dependent variable (Cohen & Manion, 1994; Gay & Airasian, 2000). The sample of the study is composed of 15 people for the experimental group and 15 people in control group from the same nursery school where the age range of the kids is 5-6 in Sakarya Province. Half of these human subjects are female and other half is the male.

A unique program is applied for the experimental and control group for four weeks (totally 20 days). This program includes use of technological devices within the scope of Turkish language activities, drama, art, play, preparation for reading and writing with 13 new words which the investigators found by scanning the literature and appealing for expert opinions. For the experimental group, the activities on 13 new words are actualized as two events for each day by using technological devices. The control group realized these events as two activities for each day without technological tools.

Children's information about new words is evaluated by a pretest and posttest. 13 items question list that the children evaluate themselves is used during this process.

The Program Implemented in Experimental Group: The types of activities below constitute the basis of the program. Two activities are actualized in each day with the help of a computer, DVD, projection, music center, overhead projector. Other activities are distributed by turns so as to comply with the available program in class every day.

Turkish Activity (15 activities)

Drama (3 activities)

Game (5 activities)

Music (5 activities)

Art (10 activities)

Science and Mathematics Studies (10 activities)

Preparation Work for Reading and Writing (10 activities)

Parent Involvement (10 activities)

The pretest is applied for the experimental and control group before the education program; later on, the posttest is used. The data obtained in this study is evaluated by SPSS packaged software, Mann-Whitney U Test is conducted as well. $P < .05$ level is considered by comparing Wilcoxon signed ranks test to determine which measurements are among the differences in the case of being significant discrepancies between the scores of two groups.

FINDINGS

Table 1. Mann-Whitney U test results of pretest point averages of children in experimental and control group before the program

Group	n	Mean Rank	Rank Sum	U	P
Experimental	15	15.50	232.50	112.5	1.00
Control	15	15.50	232.50		

According to Mann-Whitney U Test results of pretest point averages of children in experimental and control group, there is not found a meaningful difference between two groups ($U = 112.5$, $p > .01$).

Table 2. Mann-Whitney U test results of posttest point averages of children in experimental and control group after the program

Group	n	Mean Rank	Rank Sum	U	P
Experimental	15	23.00	345.00	.000	.000
Control	15	8.00	120.00		

According to Mann-Whitney U Test results of pretest point averages of children in experimental and control group, a statistically significant difference is found between two groups ($U = 112.5$ $p < .01$). The mean of the experimental group is substantially higher than the average of the control group. This finding shows that the program includes using of technological tools has positive impacts of children to learn new words.

Table 3. The descriptive statistics of pretest-posttest scores of children in experimental group before and after the program

Experimental Group	N	X	Standard Error
Pretest	15	.40	.13
Posttest	15	13.00	.16

Table 4. Wilcoxon Signed Ranks Test results on pre-test and post-test scores of children in the experimental group before and after the program

Posttest-Pretest	n	Mean Rank	Rank Sum	z	p
Negative rank	0	.00	.00	3.49	.000
Positive rank	15	8.00	120.00		
Equal	0	-			

According to Wilcoxon Signed Ranks Test results, a significant difference is found between the scores that children received before and after the program about the new words ($z = 3.49$ $p < .01$). The posttest point average after the program is higher than the pretest score average. There is seen a meaningful difference for the good of the posttest. Thins finding indicates that the program includes technological devices has positive impacts on children to learn new words

Table 5. The descriptive statistics of pretest-posttest scores of children in control group before and after the program

Experimental Group	N	X	Standard Error
Pretest	15	.40	.13
Posttest	15	6.53	.35

Table 6. Wilcoxon Signed Ranks Test results on pre-test and post-test scores of children in control group before and after the program

Posttest-Pretest	n	Mean Rank	Rank Sum	z	p
Negative Rank	0	.00	.00	-3.44	.001
Positive Rank	15	8.00	120.00		
Equal	0				

According to Wilcoxon Signed Ranks Test results, there is found a significant difference between the point averages of children in control group before and after the program ($z = 3.49$ $p < .01$). In other words, the posttest point average after the program is higher than the pretest point average.

Discussion

The conclusions of this study uses the technological devices for teaching new words revealed the effectiveness of the training program prepared. No significant difference between two groups (experimental and control group) based on Mann-Whitney U Test results about pretest point averages before the program indicates that the purposes and achievements on 'Language domain' in Preschool Education in 2006 supported the language progress of the children.

It is clearly seen that the experimental group who used the technological devices in programs have better scores than the control group that is educated without any technological tools. Unutkan and Gülay (2007) confirmed in their research that how important the technological devices are in the teaching of 'birth' concept to Preschool Period Kids. The results of their study are similar to ours.

It is determined in a research examines the visual perceptions of children in nursery schools with computers and without computers that the children are educated with computers get higher scores in fields such as the separation of figure and place in comparison with the children who are not educated with technology (Aral, Ayhan, 2003). This study matches with the conclusions of previous studies and also reveals the importance of technological tools usage.

Conclusion and Suggestions

The positive effect of the program for gaining new words by the technological devices (computer, projection, DVD, music center, overhead projector) in the experimental group is specified. There is a significant difference between pretest and posttest in control group learned the new words without technology. But the point averages of the experimental group are higher than the control group. This result shows parallelism with the conclusions of studies use the technological tools in education by different ways. Thus, it is confirmed that use of technology in preschool education positively contributes to gain new words and concepts.

The technological devices have features can help the lingual improvement of children in preschool period and the technical characteristics of these de-

vices support the cognitive, sensual and psychomotor development advance day by day.

The realities we lived in our country in more recent times show how important to raise individuals who know national values, are at peace with universal values, interiorized the democratic culture, have open and dynamic emotion and thought canals. We need to unite our forces to raise qualified children who have rich language-concept and wordrobe and also can express oneself. Being reflected the sensitiveness about using each kind of technique and technology support the lingual development of children who are the future of our Republic to life and practice should be our primary goal.

Suggestions

Different programs involve technological tools should be developed for different age groups to learn new words.

The in-service trainings should be organized by Ministry of Education for preschool teachers to use the technological devices in activities.

The kind and equipment of technological tools in nursery classes should be enriched by the collaboration of school managements and parent-teacher associations.

The importance and essentialness of being conducted scientific researches on language development stages and features of children in preschool period should not be neglected by the investigators and the academic world.

Notes

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