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The Effect of Game Technique on Learning Concepts in Preschool Period

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Abstract
In this study, preschool students' Mathematics. The effect of the game technique on learning some selected concepts in the field of science and Turkish-language was investigated. Numbers up to 20 are considered in the field of mathematics. Sense organs in the field of science and 10 antonyms in the field of Turkish language have been determined. The learning speeds of the students' concepts were compared by constructing traditional techniques and educational games. As a method, qualitative and quantitative methods were used Students were asked to complete worksheets containing numbers, sensory organ pictures and opposite concepts before the traditional method of mathematics on paper. Ziya Gökalp Primary School Kindergarten A branch students were chosen as the sample. Afterwards, educational game cards were constructed and card matching games expressing the concept and meaning were prepared. As a result of the applications, it was observed that the number of students who learned the determined concepts after using the game technique was higher.
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INTRODUCTION

1.1 What is a game?

The game technique is the technique most frequently used by individuals in early childhood to express themselves. Children are always the leaders in the game. Children always lead the game. According to Vygotsky, play provides the most suitable environment for cognitive mechanisms to function and is the child's creation of an imaginary solution. Play is exploration and a new creation. There is a relationship between play and communication. The child produces new behaviors by using the cause-effect relationships that he remembers from real life experiences in the game. They transfer the knowledge they have learned to the games. The games first start in a very small area in the form of researching the baby's own bodily sensations, then continue in his close environment and then are performed in large social environments (KUĞUOĞLU,KÜRTÜNCİ TANIR, 2006) It is also a technique used to prolong attention span.

1.2.Teaching concepts with games in preschool

While preschool children are interested in monologue-speaking games directed by themselves between the ages of 0-3, the period of guilt against entrepreneurship begins between the ages of 3-6 and they try to adapt to group games. Duo competitions, goal-reaching games, simple matching games are a few of them. The name of the educational game to be used in the lesson, the purpose of benefiting from the educational game and the method of playing the educational game should be explained to the students by the teacher (Yılmaz & Çeliker, 2022). Preschool educators use various techniques to teach some concepts in line with the annual goals and achievements they prepare. Traditionally, the technique of "passing over the dots and painting a picture" is used frequently. Game in the mental development of children; It offers a variety of learning resources: • Exploring and using shapes, sizes, surfaces, and colors, • Experience with numbers, spatial relationships, and abstract concepts, • Opportunity to use and develop language skills, ❖ It provides an opportunity to remember old experiences and transform them into new perceptions and relationships. ❖ It helps children to know the world they live in and to understand the difference between reality and imagination (KUĞUOĞLU,KÜRTÜNCİ TANIR, 2006).

METHOD

2.1. Research pattern

This research aimed to observe the effect of game technique on concept learning in preschool individuals. Qualitative and quantitative data were examined in the research.

Table1. The procedures used during the research and the number of students

Disciplines	Concepts using game technique	Concept reinforcers with worksheets	Experimental groups	control groups
Maths	Numbers(1-20) Number object matching educational garden game	Matching numbers to objects via pen	10	10
Science	sense organ object matching digital game	Matching sense organs to related objects by line	10	10
Turkish language	10 identified contrasting concept cards	Drawing lines to opposite images of objects	10	10

The research period lasted 1 month. Reinforcers were repeated for 3 weeks. For the concepts selected in these processes, research was conducted on the same students. Mathematics, Science and Turkish-Language disciplines are discussed. The concepts chosen from these disciplines have not been left out. After 3 repetitions, in the 4th week, the students were individually shown the concept cards in a quiet environment and the oral exam technique was applied. Here, quantitative data were obtained.

2.2. Working Group

First of all, numbers between 1 and 20 in Mathematics, our 5 sense organs in Science, and the opposite meanings of words in Turkish-Language were transferred to our class consisting of 5-year-old students through presentation and direct expression method. In order for them to learn this information permanently, the students in the class were divided into two groups. 10 students were seated at the table. 10 students were taken out to the garden for Turkish and Mathematics games. The students sitting at the table were asked to paint the objects opposite the numbers as much as the numbers. The students who were taken to the garden were divided into two groups and number cards between 1 and 20 were prepared for both groups. 20 more cards were taken and pictures from 1 to 20 were made on it. The groups were paired and the number object cards matching game was played. This process took 3 weeks, once a week. When the number cards are shown to both groups after the completed activity, the number of students who give the correct answer in the group sitting at the table is 4 people. In the group playing the matching cards game, the number of students who answered correctly was 7. This rate is almost twice that of the other group. In the field of science, a digital game and a traditional technique have been prepared for emotional organs. 10 students were determined to sit at the table. Learning apps matching games were prepared for 10 other students to play on the computer. Worksheets with pictures of sense organs and objects felt with those organs were distributed to the students sitting at the table to be matched. Objects themselves are prepared to match. Students were asked to match objects with which sense organs they felt. These activities were repeated once a week for 3 weeks, and when the students were asked as an oral exam by showing the picture cards with which sense organ they felt the objects, 5 people who completed the table activity gave the correct answer. The number of students who completed the game activity and said correctly with which sense organ they felt the objects was 8.

10 students who dropped out in the Turkish-language field were given matching worksheets showing opposite concepts. Picture cards expressing dummy concepts were prepared for the 10 students who were taken out. The game of finding opposite concepts was played by matching 10 people 5 to 5. The game was played as a double competition. Again, these activities were repeated for 3 weeks.

As a result of these repetitions, when the students in the 4th week were taken to individual measurement, the concepts were shown and the antonyms were asked, 9 of the students who used the game technique gave correct answers to all of them. This situation is 5 people in the students who match in the worksheets. The concepts chosen for measurement are the same concepts used in the game and worksheets.

3.Data

During the game, the general aspirations of the students were observed and it was predicted that this would be more effective in learning the concepts. It was observed that the attention of the students who tried to complete the worksheet was more scattered, and it was predicted that this would have a negative effect on the oral exam technique to be made in the final measurement. This is data obtained as a result of a qualitative observation.

As a result of the research, willing and permanent learning occurs in individuals who use game technique in education. In addition, children who are asked to sit at the table and be matched by drawing objects using pen and paper find the situation boring and cannot concentrate. When the game technique is used in education, it relieves mental fatigue. It caught the attention of the students. In addition, individuals who play games learn faster.

Table2. Number of Correct Answers by Those Using Traditional Reinforcers to the Asked Concepts

Disciplines	Concepts	Number of students who can say the concepts	control groups
Maths	numbers from 1 to 20	4	10
Science	Our senses	5	10
Turkish language	Antonyms	5	10

Table3. Asked concepts Number of Correct Answers by Those Who Reinforced with Game Technique

Disciplines	Concepts	The number of students who answered correctly	Control groups
Mathematics	Numbers from 1 to 20	7	10
Science	Our 5 sense organs	8	10
Turkish-Language	Antonyms words	9	10

4.Discussion Conclusion and Suggestions

The game technique can be used in every discipline in teaching concepts to preschool children. Games can vary. Children were able to express themselves more easily in the game technique, which was observed as an effective reinforcer. In addition, students who are handed out worksheets at the desk experience the excitement of making mistakes in this activity where the leader is the teacher. However, since he is the student who decides and is the leader in the game technique, he does not experience the excitement of making mistakes. Teachers who aim to strengthen the finger muscles can arrange various game activities such as kneading dough and attaching clothespins to use their hands. While preparing the game, students will internalize the concept to be taught when the demands and needs of the students are taken into consideration and diversified by using materials. In addition, since each game activity includes different stimuli and different materials, students who receive a lot of stimuli will learn the next concept more easily. Because the words they learned in the game, the learning will be permanent as the instructions are repeated frequently.

5. Findings

In the research, it was observed that preschoolers were able to express themselves more clearly in the game environment. The students who participated in the pen-and-paper activities at the desk experienced reluctance and low concentration in this process. As stated in the table obtained in the data section, it was seen that the game technique was more effective in teaching concepts in preschoolers. It has been observed that learning is easier when the environment is suitable for the developmental periods and the game is prepared for the students.

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