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Analysis of the effect of educational games on primary school students' audacity level

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Abstract

Game; reflects the audacity level and inner world of child more realistically. Thus it becomes possible to observe the real personality of child with its mistakes, weaknesses, inventions, abilities and tendencies. Our intention in this research is to investigate the effect of educational games on the audacity level of students studying at the primary schools.

Research group is consisted of 50 male, 42 female total 92 students studying at 6 th, 7 th and 8 th grades of Piri Reis Primary School. Firstly the existing data about the aim of examination is given systematically by researching the relevant literature. Thus a theoretic frame is created about the subject. Secondly the children are made to play 2 educational games at the beginning and the end of the gym classes for 8 weeks in order to reach the aim of research. The qualities of the games are power, speed and flexibility. Rathus Audacity Inventory, developed by Rathus and translated to Turkish by Voltan (1998), is used at the beginning and end of the period covering 8 weeks time.

In the analysis and interpretation of data; pre-test, results of last test, test of Wilcoxon, t test, test of Anova; and to measure the difference between the groups Tukey test is used and significance $P < 0,05$ is taken. SPSS (Statistical package for social sciences) package program is used to evaluate and find the rated values and (Cronbach Alpha) 0.92 is found.

As a result it is seen that educational games are effective on the development of audacity level of children studying at primary schools, in addition it is seen that there is an increase on the audacity level of 6 th and 8 th grade students compared to 7 th grade; boys' compared to girls' after educational games.

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Keywords: Educational games; audacity; primary school; student.

1. Introduction

Game; is a common way of understanding among children. Game is a very important activity that helps children to get into touch with the world of objects that develops their physical and mental structure, to gain freedom and individuality and later to become socialized (Gürün 1984).

Huizinga enumerates the qualities of the concept of the game as (at the) below:

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Game is a voluntary action dependant on the will. Ordered or compulsive game is not a game. It can only be a compulsory similar of it. Game takes the person from real world temporarily to its own world. The child is conscious of his being out of reality. So the game is not selfish. Differently from daily life it is not supposed to satisfy some needs or demands. Game is like a break, reasting and ornament of daily life

Game is different from daily life in terms of time and place. In this respect it is has its own limits of time and place. Game starts and finishes in one point, it is devoted to an outcome. Game has a fascinating effect.

Every game has some rules. If the rules are broken the game is finished, it is collapsed. Game rules are connective and it gives no place to doubt. It makes social grouping easy.

Games obtain more attention than other learning thecniques as it makes passive students active.

When the term of audacity is evaluated in terms of social psychichology, it games different kinds of environmental meanings. Expectations and needs of people from urban and rural areas are different. Taking in to consideration the roles of individuals from different life styles; the conditions have differences in their behaviours, like this a behaviour that is supposed to be bold in an urban area may not be perceived as a bold behaviour in rural area (Tegin, 1990).

2. Method

2.1. Research group:

Research group is consisted of 50 male, 42 female total 92 students studying at 6th, 7th and 8th grades of Piri Reis Primary School.

2.2. Collecting data

Firstly the existing data about the aim of examination is given systematically by consulting the relavent literature. Thus a theoric frame is created about the subject. Secondly the children are made to play 2 educatinal games at the begining and the end of the gym classes for 8 weeks in order to reach the aim of research. The qualities of the games are power, speed and flexibility. Rathus Audacity Inventory, developed by Rathus and translated to Turkish by Voltan (1998), is used at the beginning and end of the period covering 8 weeks time.

2.3. Analysis of data

In the analysis and interpetation and of data; pre-test, results of last test, test of Wilcoxon, t test, test of Anova; and to measure the difference between the groups Tukey test is used and significance $P < 0,05$ is taken. SPSS (Statistical package for social sciences) package program is used to evaluate and find the rated values and (Cronbach Alpha) 0.92 is found.

3. Findings

Table 1 Results Of The Wilcoxon Signed Ranks Test Results For The Pre-test and Last-test Scores of Primary School Students' Audacity Level

Pre Test – Last Test	n	Mean Rank	Sunm Of Ranks	Z	P
Negative Ranks	46	40,89	2397,00	-1,005	0,031*
Positive Ranks	46	52,11	1881,00		
Equal	-	-	-		

As it is seen on the table 1; when the wilcoxon signed ranks test results, showing if there is a significant difference between the audacity levels of primary school students before and after playing educatinal game, are examined; it shows that there is a significant difference between the audacity test scores of students, joined to the research, before and after the experiment when ($Z = -1,005$ P Value $0,031 < 0,005$). line avarage and total of

difference score is taken into consideration it is seen that this difference is in favour of positive lines namely last test score. According to these results it can be said that educational games have an important effect on development of audacity level of primary school students.

Table 2 The Dispersion, Showing The Comparison of t Test About Pre-test And Last Test Scores Of Audacity Level Of Primary School Students In Terms Of Gender Variable

Pre test	N	Mean	Std. Deviation	t	P
Male	50	18,300	15,894		
Female	42	11,523	21,567	1,732	0,087
Last test					
Male	50	22,540	14,139		
Female	42	12,047	19,981	2,940	0,004

As it is seen on table 2; when the dispersion, showing the comparison of t test about pre-test and last test scores of audacity level of primary school students in terms of gender variable is examined; no significant difference is found between the pre test results of audacity level in terms of gender variable (t value =1,732 P=0,087>.05). So it can be said that audacity levels of the groups are equal at the beginning. There is a significant difference between the last test results of audacity levels in terms of gender variable (t value =2,940 P=0,004<.05). It shows that educational games effects audacity level of students in a positive way.

While The average audacity level of male students is (\bar{X} =22,540) the average audacity level of female students is (\bar{X} =12,047). It show us that audacity level of male students is higher compared to the female students.

Table 4 Dispersion, Showing The Comparison Of One-Way Anova Test About The Last Test Scores Of Primary School Students' Audacity Level In Terms Of Class Variable

Last Test	Sum of squares	sd	Mean of square	F	P
Between the groups	1059,019	2	529,509	1,499	0,029
Within the groups	31438,057	89	353,237		

As it is seen on the table 4; when the dispersion, showing the comparison of One-Way Anova Test about the last test scores of primary school students' audacity level in terms of class variable is examined, a significant difference is found between the class variable and students' audacity result (F value =1,499 P=0,029<0.05).

Table 5 Analysis Results Showing The Comparison of Primary School Students' Audacity Level In Terms of Class Variable With Tukey Test

	Class variables	Mean Differences	P
6 th grade	7 th grade	8,5558	0,206
	8 th grade	5,7033	0,047
7 th grade	6 th grade	8,5558	0,206
	8 th grade	2,8525	0,812
8 th grade	6 th grade	5,7033	0,047
	7 th grade	2,8525	0,812

As it is seen on table 5; in this analysis result that primary school students' last test scores of audacity level is analysed with tukey test; it can be said that there is an increase at the audacity level of primary school students of 6th and 8th grade after educational games.

4. General Discussion

The aim of this research is to analysis the effect of educational games on the audacity level of primary school students. The results, related to the general aim are below.

When it is examined if there is a significant difference between audacity levels of students before and after playing an educational game it shows that there is a significant difference between the audacity levels of students, joined to the research, before and after the test ($P < 0,05$). If line avarage and total of difference score is taken into cosideration it is seen that this difference is in favour of positive lines namely last test score. According to these results it can be said that educational games have an imporatant effect on development of audacity level of primary school students.

No significant difference is found between the pre test results of audacity level of primary school students in terms of gender variable ($P > 0,05$) So it can be said that audacity levels of the groups are equal at the beginning.

A significant difference is found between the pre test and last test scores of audacity levels of primary school students in terms of gender variable ($P < 0,05$). The avarage audacity level of male students is ($\bar{X} = 22,540$) while the avarage audacity level of female students is ($\bar{X} = 12,047$). It shows that audacity level of male students is higher compared to the female students. It shows that male students are better than female students on expressing their real feelings, maintaining their legal rights and obtaining the goals they wanted. While this result shows parallelism to the studies of Kaya (2001), Kimble and his friends' (1984), Deniz (1997), Bal (2006) and Görüş (1999) made, it does not shows paralellism to the study that Arı (1989), Tekin and his friends (2006) and Kuru and Çetin (2007) made. The reason of this thought to be as arouse from the social-economical levels, cultural differences and the anxiety level at that time, of the student group dealt with.

When the dispersion, showing the comparison of about the pre test scores of primary school students' audacity level in terms of class variable is examined, no meaningful significant difference is found between the class variable and students' audacity level ($P > 0,05$). It shows that audacity level of the groups at the beginning are equal.

When the dispersion about the last test scores of primary school students' audacity level in terms of class variable is examined, a meaningful significant difference is found between the class variable and audacity level of students ($P < 0,05$). As a result of this difference it can be said there is an increase at the audacity level of 6th and 8th grade primary school students after educational games. While this result shows parallelism to the study of Kaya (2001), Teğin (1990) and Tatakır (2003) made, it does not show paralellism to the study that Becet (1989) and Uğuroğlu (1996) done. The cause of this can be thought that stres factor and education process inactivates social life.

If we make a general conclusion; we see that, educational games are effective in increasing audacity level of primary school students; moreover it is seen that there is an increase in the audacity level of 6th and 8th grade students compared to 7th grade students and of male students compared to female students, after educational games. It can be thought that communicating efficiently and taking into cosideration the physical, physicological and emotional development of individuals effects the manners of adolescents. By means of sports game children not only are made to be with their peers but also they have an experience about obeying the rules, putting up with winning and losing.

Suggestions:

- 1-students' understanding of social ability shoul be developed,
- 2-education of audacity should be developed,
- 3-audacity behaviours should be developed,
- 4-the physiological, psychological and emotional effect of the games on the children should be taken into consideration.

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