



**ORIGINAL RESEARCH PAPER**

**Education**

**EFFECTIVENESS OF VIDEOGAMES ON CLASSROOM ATTENTION AND PROBLEM SOLVING OF MIDDLE SCHOOL STUDENTS**

**KEY WORDS:** Videogames, Attention Level, Children & Problem Solving

**Dr. M. Vasimalairaja**

Associate Professor in Education, Department of Education, DDE, Alagappa University, Karaikudi

**ABSTRACT**

An attempt has been made to find out the effectiveness of videogames on classroom attention and problem solving of middle school students. The present study focus on the positive aspects of playing videogames, the attention level is studied in the classroom by the students after playing it. Most of the children have less attention problems in classroom at the beginning stage of the videogame playing later on it is getting worsened. Problem solving skills can be improved by the use of videogames and prepare the children to take a strategic decisions that help them to succeed in the real world. Many problem solving skills can be learnt through videogames but the task of the parents is to figure out the games that will serve the purpose.

**INTRODUCTION**

Videogames has an effect on the lives of children and adolescence population. Most of the children spend a great deal of time by television and playing videogames (Polman, 2008). It was found that children spend an average of twenty five hour in a week and for the television and nine hour a week by playing videogames (Gentile et al., 2004). It is evident that the children spend ten times more in such new media than they spend for reading. There are many studies which focussed on the violent nature of videogames and increasing the aggressive behaviour in children.

**NEED AND SIGNIFICANCE OF THE STUDY**

Video games are a ubiquitous part of almost all Children's and adolescence life. The vast majority of research by educationists on the effects of gaming has been on its negative impact on the potential harm related to violence, addiction and depression. In the present era, the need of studying the potential benefits of the videogames is more important as from all the age groups; from children to adults playing videogames is an important part of their life because the nature of the video game has changed dramatically in the last decade which is becoming increasingly complex, diverse, realistic, and social in nature. A small but significant body of research has begun to emerge, mostly in the last 5 years, documenting the benefits of playing video games. In the present research the focus is mostly on the positive benefits of video game playing.

**OBJECTIVES**

1. To find out whether there is any significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Classroom Attention.
2. To find out whether there is any significant difference between the Pre-test and Post-test of control group (Neither Playing) with regard to Classroom Attention.
3. To find out whether there is any significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Problem Solving.
4. To find out whether there is any significant difference between the Pre-test and Post-test of control group (Neither Playing) with regard to Problem Solving.

**HYPOTHESIS**

1. There is no a significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Classroom Attention.
2. There is no significant difference between the Pre-test and Post-test of Control group (Neither Playing) with regard to Classroom Attention.
3. There is no significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Problem Solving.
4. There is no significant difference between the Pre-test and Post-test of Control group (Neither Playing) with regard to Problem Solving.

**METHODS USED**

The researcher has adopted an Experimental pre-post design

method to find the cause effect relationship between the variable used.

**POPULATION**

In the present study the population is consisted of all the middle school children belonging to the age group of 10-13 years.

**SAMPLE**

A purposive sampling technique was adopted. Ninety participants were selected from a CBSE school wherein English is the medium of instruction which belongs to Krishnagiri district.

**TOOLS USED**

The investigator developed

1. Videogames
2. Classroom attention scale developed and standardized by the investigator
3. Problem solving scale developed and standardized by the investigator

**STATISTICAL TECHNIQUES USED**

Descriptive statistics namely, mean and standard deviation, t-test was computed for the variables in the study.

**ANALYSIS AND INTERPRETATION OF DATA**

**Null Hypothesis: 1**

There is no significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Classroom Attention.

**Table: 1 Comparing Means Scores of Classroom Attention between Pre-test and Post-test of Experimental Group**

Group	Mean	SD	t- value	df	Remarks at 5% Level
Pre-test	36.70	3.436	31.598	29	S
Post-test	80.53	6.962			

(At 5% level of Significance of the table value of 't' is 1.96)

It is inferred from the above table that there is significant difference in the mean scores between pre-test and post-test group of Experimental Group I (Playing Videogames) with regard to the Classroom Attention. Therefore the null hypothesis is rejected.

**Null Hypothesis: 2**

There is no significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Problem Solving.

**Table: 2 Comparing Means Scores of Problem Solving between Pre-test and Post-test of Experimental Group**

Group	Mean	SD	t- value	df	Remarks at 5% Level
Pre-test	39.27	3.413	53.003	29	S
Post-test	105.77	6.867			

(At 5% level of Significance of the table value of 't' is 1.96)

It is inferred from the above table that there is significant difference in the mean scores between pre-test and post-test group of Experimental Group (Playing Videogames) with regard to the Problem Solving. Therefore the null hypothesis is rejected.  
Null Hypothesis: 3

There is no significant difference between the Pre-test and Post-test of Control group (Neither Playing) with regard to Classroom Attention.

**Table: 3 Comparing Means Scores of Classroom Attention between Pre-test and Post-test of Control Group (Neither Playing)**

Group	Mean	SD	t- value	df	Remarks at 5% Level
Pre-test	33.40	8.228	1.175	29	NS
Post-test	30.23	11.767			

(At 5% level of Significance of the table value of 't' is 1.96)

It is inferred from the above table that there is no significant difference in the mean scores between Pre-test and Post-test group of Control Group (Neither Playing) with regard to the Classroom Attention. Therefore the null hypothesis is accepted.

**Null Hypothesis: 4**

There is no significant difference between the Pre-test and Post-test of Control group (Neither Playing) with regard to Problem Solving.

**Table: 4 Comparing Means Scores of Problem Solving between Pre-test and Post-test of Control Group (Neither Playing)**

Group	Mean	SD	t- value	df	Remarks at 5% Level
Pre-test	33.67	9.308	1.340	29	NS
Post-test	30.33	23.084			

(At 5% level of Significance of the table value of 't' is 1.96)

It is inferred from the above table that there is no significant difference in the mean scores between Pre-test and Post-test group of Control Group (Neither Playing) with regard to the Problem Solving. Therefore the null hypothesis is accepted.

**FINDINGS**

1. There is a significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Classroom Attention.
2. There is a significant difference between the Pre-test and Post-test of Experimental group (Playing Video games) with regard to Problem Solving.
3. There is no significant difference between the Pre-test and Post-test of Control group (Neither Playing) with regard to Classroom Attention
4. There is no significant difference between the Pre-test and Post-test of Control group (Neither Playing) with regard to Problem Solving.

**CONCLUSION**

An attempt has been made to find out the effectiveness of videogames on classroom attention and problem solving of middle school students. The findings revealed that video game playing is also an effective tool, with its interactive and decision affecting nature it encourages problem solving skills among the players. When children sit to play a video game the cognitive capacity is increased and the brain remains intact and alert. A growing body of evidence suggests that videogames may exacerbate attention problems and can interfere in the classroom also.

**REFERENCES**

1. Green, C. S., Bavelier, D. (2006 b). Enumeration versus multiple object tracking: The case of action video game players. *Cognition*. 101 (1):217–245.
2. Greitemeyer T, Osswald S, Brauer M. (2010). Playing prosocial video games increases empathy and decreases Schadenfreude. *Emotion*. 10(6):796–802.
3. Green, C. S., & Bavelier, D. (2003). Action videogame experience alters the spatial resolution of attention. *Psychological Science*. 18(1), 88-94.
4. Green, C. S., & Bavelier, D. (2003). Action video game modifies visual selective attention. *Nature*. 423, 534-537.