



RESEARCH ARTICLE

Effect of Educational Toys on Academic Performance of Pupils in Primary Schools in Ondo State, Nigeria

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ABSTRACT

This study examined the effect of educational toys on academic performance of pupils in primary school in Ondo State, Nigeria. The study employed pre-test-post-test control group quasi experimental research design. The sample population comprises of one hundred (100) pupils in kindergarten classes of primary schools in Ondo West Local Government Area of Ondo State. Two intact classes were selected through simple random sampling technique from each of the selected schools and later sub-divided into experimental and control groups. The study was guided by three null hypotheses. The two instruments used in the study were: Educational Toys Performance Test (ETPT) and Assorted Educational Toys (AET). Data were also analysed with the use of mean standard deviation and t-test statistical tools. Findings of the study revealed that pupils taught with the use of Assorted educational toys with the post-performance mean score (\bar{X} =72.44) performed better than their counterparts taught with conventional method with post mean performance score (\bar{X} =60.46). The finding also revealed that both male and female pupils performed equally when taught using educational toys while the male was the post-performance scores (\bar{X} =65.64) respectively. Lastly, in the findings, it was revealed that pupils in private primary schools performed higher than their counterpart in public primary schools. The pupils in private primary schools had post- performance score (\bar{X} =70.73)while their counterpart in public primary schools had post performances score (\bar{X} =60.17). It was concluded that the use of assorted educational toys increases pupils' academic performance in primary schools and it was recommended that adequate Assorted educational toys should be provided to primary schools and teachers should be trained effectively on how to use the Assorted toys for teaching.

Key words: Assorted Educational toys, Performance, Kindergarten and Gender

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INTRODUCTION

The origin of toys is prehistoric, dolls representing infants, animals and soldiers as well as representations of tools used by adults are readily found at archeological sites. The origin of the word "toy" is unknown but it is believed that it was first used in the 14th century. Toys are mainly made for children. Playing with toys is important when it comes to growing up and learning about the world around us. Younger children use toys to discover their identity, help their bodies grow strong, learn cause and effect, explore relationships and practice skills they will need as adults. Adult also use toys to form and strengthen social bonds, teach remember and reinforce lessons from their youth, discover their identity, exercise their minds and bodies, explore relationships, practice skills and decorate their living space (Powell and Barry, 2010).

Educational toys can develop the cognitive skills of children when used effectively and this enable the child to think freely. Toys that can be used to develop the cognitive skills include puzzles and number games. It can also develop motor skills, when the right toys are used, its can bring about fun and enjoyment and enjoyment is an essential component when choosing a toy for children (Goldstein, 2003).Educational toys develop perception, intuition and reasoning. If children are provided with the right toys, they learn to draw, to paint, to use crayons, to use a pair of scissors and so on (David and Thompson, 2010).

Not only that educational toys when utilized effectively can develop the children socially, language skills, emotional and on (William, 2009). The way to keep children busy at school is to provide them with the right and appropriate toys to play with and to boost their learning capacity; it is the responsibility of teachers at school to provide learners the right educational toys for effective teaching and learning to take place.

Gender is another important factor affecting learners' performance in school. Alexander and Hines (2002) reported on male-female differences in toy preferences in non-human primates, they suggested that an innate sex difference in processing movement, colour or form may contribute to adaptive significance for male and females. Boys are typically more physically active than girls and this is reflected in their play. Sex difference has been explained in terms of both culture and biology. Alexander and Hines, (2002) opined that as both male and female like in basic ways and both need variety in their play such as playing alone, as well as playing with others of varying ages, playing quietly and playing actively. Isabelle (2003) in his study identify the impact of particular stereotyped toys have on young children's complexity of play, and how these behaviours may influence children's cognitive development using play assessment. The study revealed that higher levels of play complexity were surely manifested when children played with female stereotyped toys. Also, Carter and Levy (1988) was of the opinion that girls would be more likely to play with female stereotyped toys than male or neutral stereotyped toys, whereas boys are more likely to manipulate male stereotyped toys than female or neutral stereotyped toys.

Also, school type is another factor that affects academic performance of learners in schools. Frenette and Chan (2015) observed that private high school students score significantly higher than public high school students on reading, mathematics and science assessments at age 15, and have higher levels of educational attainment by age 23. To them two factors consistently account for these differences. Student who attended private schools were more likely to have socio-economic characteristics positively associated with academic success and to have school peers with university-educated parents.

Orlu, C. (2013) conducted a research among six hundred teachers and students with the aim to find out environmental influence on the academic performance of secondary school students, in Port Harcourt Local Government Area of River State. It was observed that the school environment has a significant influence on academic performance.

The location of the school affects students' performance. Sunday (2012) in his study revealed that there is a significant relationship between physical school environment and students' academic performance in senior secondary school Physics. To him, the physical school environment has some influences on students' academic achievement in senior secondary school Physics. The physical facilities, human resources, and the relationship among them determine the physical environment of the school. The result indicated that students with adequate and effective laboratory facilities in physical perform better than those in school with less or without facilities. However, the school type (private or public and gender are two important factors affecting the use of educational toys in school. Private school tends to have both better funding and smaller size than public school.

STATEMENT OF THE PROBLEM

Studies had revealed that teaching-learning in primary schools is characterized with the use of conventional teaching method, which makes learners to be passive and teacher dominates the classroom. And this does not bring about teacher-learners interaction in the classroom. The use of conventional teaching method often responsible for learners' low interest and poor academic performance of learners in primary schools. Therefore, the need to introduce assorted educative toys for the teaching of learners arises. This study investigated the effect of educational toys on academic performance of pupils in primary schools in Ondo State, Nigeria. The effect of school type and gender on academic performance was also examined in this study

RESEARCH HYPOTHESES

The following research hypotheses were formulated for the study-

Ho₁: There is no significant difference between the pre-test mean performance scores of pupils in the experimental and control groups using assorted educational toys for learning.

Ho₂: There is no significant difference between the gender and academic performance of pupils using assorted educational toys for learning in primary schools.

Ho₃: There is no significant difference between the academic performance of pupils in public and private schools using assorted educational toys for learning in primary school.

METHODOLOGY

This study adopted pre-test, post-test control group quasi experimental research design to determine the effect of educational toys on academic performance of pupils in primary schools. The population of the study comprises of all learners in kindergarten class in Ondo West Local Government Area of Ondo State, Nigeria. A sample size of 100 kindergarten learners made up of 41 males and 59 females were randomly selected from public primary schools and 48 private nursery and primary schools. Intact classes were used in each of the selected schools and were later sub-divided into experimental and control groups. The experimental group consists of 20 boys and 17 girls making it to be 37 pupils while the control group consisted of 40 boys and 22 girls making it total of 62 pupils.

Two research instruments used in the study were- (i) Educational Toys Performance Test (ETPT) and (ii) Assorted Educational Toys (AET).

Educational toys performance test (ETPT) was a self-develop instrument consisting of 20 items multiple choices with options a-d on the use of toys in school. This was designed to test pupils' ability on the use of toys in the classroom. The instrument was validated through experts review. The instrument was later administered on 30 students from school in Ogun State primary schools used for the study. A reliability coefficient of 0.92 was obtained using Cronbarch Alfa method.

Assorted Educational Toys (SET) is interactive toys provided by researcher. It consists of blocks, string telephone, mobiles, baby dolls, toy phones, dolls and doll bells dress up accessories (scarves, purses, plastic animals, and plastic vehicles. The instrument was validated by 2 early childhood experts in University of Ilorin, Ilorin and researcher was advised on how to use the toys provided effectively.

RESULTS

Hypothesis 1: There is no significant difference between the pre-test mean performances Scores of pupils in the experimental and control groups

Table 1: Pre-test mean performance scores of experimental and control groups

Group	N	Mean	Std.Ddft	Sig.	Remark
Experimental Group	37	72.44	18.58	98	-3.349 .001
Control Group	63	60.46	18.82		Sig.

Table 1 shows that the mean scores and standard deviation of experimental group was 72.44 and 18.58 respectively while the mean scores and standard deviation of control group was 60.46 and 18.82 respectively. The values revealed an appreciable difference in the mean which indicates that the academic performance of the pupils in experimental group is higher than those in control group. Thus, there is significant effect of educational toys on academic performance of primary school pupils in learning ($df = 98, t = -3.349, p < 0.05$). Hence, hypothesis 1 is not accepted.

Hypothesis 2: There is no significant difference between the gender and academic Performance of pupils using educational toys in primary schools.

Table 2: T-test showing the difference between academic performance and the gender of pupils in primary schools

Group	N	Mean	Std.Ddft	Sig.	Remark
Male	41	66.09	14.29	98	.142 .888 Not Sig.
Female	59	65.64	16.65		

Table 2 shows that the overall scores of academic performance of male pupils in primary schools are 66.09 while that of female academic performance is 65.66. The values reveal no appreciable differences in the mean which indicates that the academic performance of both male and female pupils were not significantly different in learning using educational toys. Thus, there is no significant difference between the academic performance and the gender of pupils in primary schools ($df = 98$, $t = .142$, $p > 0.05$). Hence, hypothesis 2 is accepted. This result implies that both male and female pupils perform equally in their academic performance in learning in schools.

Hypothesis 3: There is no significant difference between the academic performances of Public and private schools in using toys in learning.

Table 3: T-test showing significant difference between public and private school academic performance

Group	N	Mean	Std.Ddft	Sig.	Remark
Public	52	60.17	20.03	98	-3.411 .001 Sig.
Private	48	70.73	19.24		

Table 3 shows that the overall mean score of academic performance of the pupils who are from public schools are 60.17 while that of those from private schools are 70.73. The values reveal an appreciable difference in the mean which indicates that the academic performance of the pupils that are from public schools is lower than that of the pupils who are from private schools. Thus, the significant difference between the academic performance of pupils in public and private schools in using educational toys for learning ($df = 98$; $t = -3.411$; $p < 0.05$). Hence, hypothesis 3 is not accepted.

DISCUSSION OF FINDINGS

Findings relating to null hypothesis 1 show that pupils in primary school taught using educational toys performed higher than those in control group. This hypothesis was not accepted for that significant difference exist between the experimental and control groups. The findings of this study is supported by the works of Powell and Barry, (2010) and David and Thompson (2010), who found that educational toys develop the perception, intuition, reasoning of the pupils and toys can be used to discover pupils' identity, help their body grow-strong and practice skills they will need as children.

Findings of the study also reveal that the performance of male and female pupils in primary school taught using educational toys shows no appreciable difference in the mean which indicates that the academic performance of both male and female pupils were not significantly different, hence the hypothesis was accepted. Alexander and Hines (2002) and Carter and Levy (1988) whose works showed that educational toys can be used by both male and female in learning in the school.

Finding of the study on research hypothesis three indicated that the performance of pupils in public and private school is significant. There is difference between the performance of pupils in public and private schools in using educational toys for learning in the classroom. This finding is in line with that of Frenette and Chan (2015), Orlu, (2013) and Isabelle (2003) who reported that private schools are provided with needed infrastructural facilities such as good laboratory, well equipped computer room, library and so on, while in the public schools owned by the government the needed amenities were not available and this has affected the academic performance of pupils in primary schools.

CONCLUSION

This study revealed that exposing pupils in primary school to educational toys enhance their academic performance in the classroom. This implies that the use of educational toys always increase pupils' academic performance in primary schools.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. Gender-specific toys should be provided to offer different advantages to learners.
2. Government should provide range of educational toys that gives pupils enjoyment and at the same time the capability for them to learn.
3. Teachers should use coloured toys for teaching pupils in primary school to attract, and gain their attention in the classroom.
4. There should be special time allocated for the use of educational toys in schools.
5. Workshops, seminars and conferences should be organized for teachers in primary to train them on the use of educational toys in the classroom.
6. Play is also very important when using educational (toys, therefore teachers should endeavour to use play way method in teaching pupils in the classroom.
7. Teachers should include television movies and games to reinforce the pupils in the classroom.

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