Young Children's Achievement in Learning Mathematics with Computers under Penchant Teachers

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Abstract

Training of young children is a crucial issue in the development of any nation for sustainability. These children naturally depend on the guidance of some adults both at home and at school. They begin by learning from their parents and when they enter school system, they need to transit under the guidance of trusted teachers who will be penchant and have flair for teaching young learners. In our contemporary, information technology is the bane of educational pursuit. Using computers for instruction has been proved to be effective but the use of computer in teaching young children in Nigeria primary school has not been found productive. One of the major reasons is that many teachers do not possess basic skills for teaching with computers while in other cases, the computers are not available. In this study, 58 teachers were identified for use using questionnaire; 41 penchant teachers and 17 inept teachers. Among the penchant teachers, eleven (11) did not have computer for instruction, twelve (12) had computer but could not effectively operate and use them for teaching while   eighteen (18) could operate and use computer for training. Thus only 18 penchant teachers were compared with 17 inept teachers. Findings showed that; where teachers are penchant and have flair for young children, children do better, using computer in learning. one recommendation is that penchant teachers be accorded priority attention in their request for Instructional materials since they are likely to produce better result than their counterpart inept teachers.

Keywords: Penchant Teacher, Inept Teacher, Flair, Computer, Young Learners

1. Introduction

Mathematics acts as a pivot through its application in science and technology in the development of nations. Consequently, it is accorded the status of a compulsory subject beginning from the primary and then to university admission requirements. Therefore, it behoves the curriculum planners to investigate reasons why children do not make good progress in the subject mathematics even when sciences and technology are fast advancing for improvement and development of nations. We live in the world dependant on science and technology evolution of new techniques and methods of learning mathematics via computer interaction. It is therefore a mirage to Mamullin (2001) who rightly said it would be a deservice to the world if learners are not instructed on how to use technology, and hence mathematics, in developing their skills and talents. It is obvious that young learners study mathematics the way their teachers present the content and direct the activities in mathematics class. Critical to this point is the quality of mathematics teachers in relation to their interaction and relationship with the learners. Therefore, it is necessary to differentiate teachers into two categories here and examine their effect in teaching with computer facilities on the young children in mathematics. These groups of teachers are the penchant teachers and inept teachers. The penchant teachers are those who developed and sustain a parental mode of relationship with the children in the class while the inept teachers are distancing themselves from their class children as aliens. There is a point to be established here; it is very important for teachers to treat their class children as their own biological children. This way, we intend to model the relationship between a child and mother in home setting relationship. This view followed from the point by Harris (1997) that the role and characters of women and girls at home influence how they behave in schools and society. This feminine influence on children has been proved to positively impact on the young children exposure to participating in the school mathematics learning.

In our contemporary schools, the learning environment is expected to gender positive and active interaction with computers. This would achieve the goals of learning mathematics if only the teachers are poised to affectionately guide the learners on the needed skill sought for in mathematics learning. Therefore in this work, we explore the possibilities to single out the penchant teacher and see how their relationship with the young children would impact on their l learner of mathematics. The instructional here utilizes the computer as the instruction material media.

The purpose of this work is to see the effectiveness in mathematics learning under the teacher- learner interaction with computer which Babadogun and Olkun (2001) said is central in community educational system involving both the teacher and learners actively. This way, the teacher are expect to take new role as parent in the view of ward and Tiessen (1997).

2. *Review of Related Literature*

Young learners in primary school setting need petting, soft – handling, cajoling and encouragement to participate actively in learning especially in the   learning of mathematics. To do these requires teachers being penchant and having flair to associating and leaning leading young ones in the class activities. The penchant teacher is expected to love teaching and devoted to role playing as parent with the young learners in the class. The teacher should exhibit high tendency to model and modify the behaviors of learners.

Babadogun and Olkun (2007) advocated for teaching –learner-centered model of classroom interaction which is attainable where teachers show good, cordial relationship with the learners, called the rapport practices. This setting brings learners closer to their teachers in teaching-learning collaboration in planning and exciting experiment via computer as confirmed by Zhang (2006). The teacher acts as a parent, sitting beside learners to work as a   team with computers, and reflect parent role in education, it enhances learning in mathematics.

Penchant for parenthood toward learners is very vital in winning the attention of learners to lesson activities. Naturally, teachers   who   exhibit   love   for the   children   make   positive   impact   on the young people's ;learning. The implication of this is that, whereas children learn better under penchant teachers, they perform less under inept teachers who do not demonstrate extra care in how the children learn. From the work of D'souza and Wood (2001, 2002) rapport enable children to ask question and attempt role with expectation. This is expected to take place in mathematics lesson under penchant teachers.

Young children of adolescent age are very inquisitive, manipulative, and in this computer age, they show skill for learning mathematics through computer. The place of teacher is to guide the learners towards desirable skill and outcomes. Newby, Stepich and Rusel (2000) observed that using computer in school teaching encourage collaborative activities. The teachers have to create enable environment by providing computer and silting close-by to guide learners. Rodriguez (1996); Vable, Bower and Thomas (1996) opined that environment of computer usage allows collaboration among peers.

Review literatures have shown that young learners need conductive environment of viable instructional media, able teachers and manipulative setting to work effective in school lesson, including the study of mathematics.

3. *The Problem*

The teaching of mathematics begins from homes where the children interact under the guidance of parent, to extend their experiences and continues in the school environment where new adult take-over as parents, this transition creates a scenario of apparent relationship between home learning and the classroom learning in the mind of the young learners. However, the method of learning changed, since Zhang (2006) observed that in the school mathematics learning, the children are to be guided to ob\serve, experiment, conjecture, deduce and communicate. In this new modes of learning mathematics , different from home, it is necessary that the teachers should be penchant to relating with the children to guide them as their parents' in playing their role in the classroom. The problem here, really, is that not all parents can teach their biological children effectively due to familiarity. Furthermore, not many teachers are competent in using computer instruction. Therefore, it is very important to identify those teachers who have flair for teaching young learner as their and are also D'Souz (2003) observed that interactive learning, using information technology would encourage learners. The use of computer is often resisted by some teachers as noted by Newby, Stepich, Lehman and Russel (2000).

In this study, will the penchant teachers who have the flair for relating with learners as their own children positively impact on their interaction with computer and produce good achievement result in mathematics? Is it not true that teachers' penchant for using computer in teaching mathematics and their flair to love and teach children   will greatly improve learning outcomes? Will teachers' commitment to duty using computer as instructional materials and showing good rapport with learning make difference in pupils' achievement in the mathematics   compared   with   the result under inept teachers? The answers to these questions will be gotten from the finding of this study.

3.1 Method of Study

The variables of this study are penchant for using computer in teaching, flair for teaching young children by rapport and learners' achievement scores for comparison between penchant teachers with flair for teaching young children and their counterpart inept teachers. The entire primary school teacher's teach mathematics but it is not all of them that have flair for teaching mathematics to young children.

Out of 58 teachers used for this study, those identified, using questionnaire, as penchant teachers are 41 while 17 teachers were seen as inept. Among the penchant teachers, eleven (11) do not have computer for instruction, twelve (12) have computer but cannot effectively operate and use them for teaching while   eighteen (18) can operate and use computer for training. This leaves us with only 18 penchant teachers to compare with

the 17 inept teachers.

The response from primary 5 pupils to questionnaire for identify teachers with flair to love children as their wards identify 16 teachers to have flair for teaching young children while 42 teachers do not have flair for loving and teaching young children. Furthermore, out of 16 teachers with for teaching young children, 13 love teaching mathematics, while 14 out of the 42 are non-flair teacher that love teaching mathematics.

The information above is show in the following table

Table i: teachers love for computer and mathematics

Teachers	love for computer		love for mathematics
Penchant	18		13
Inept	17	17	14

A general test was conducted among the primary five pupils taught by the 35 teachers who love teaching using computers identified as penchant (18) and inept (17). The table should be understood as follows that out of 18 teachers, who love computers, 13 teaching mathematic. This applies also to inept teachers.The raw score was reduced to mean achievement scores(X) so that each teacher is compared using the mean score of his children.

3.2   Results

Two hypotheses were formulated and tested as follows:

Ho 1: There is no significant difference between the mean mathematics achievement scores of pupils taught by penchant teachers using computers and those taught by inept teachers using computers.

Table ii: mean achievement scores of pupils taught by teachers using computers

Group	N	X	SD	Df	α	Tc	tt
Penchant	18	56.7	4.5	33	0.05	0.646	0.645
Inept	17	48.3	5.2				

The data above shows that there is significant difference between the mean achievement scores by primary five pupils under the two categories of teachers (penchant and inept) using computers for instruction. The pupils taught by penchant teachers performed (56.7) better than those under inept teachers (48.3)

HO2: There is no significant difference between the mean mathematics achievement scores of primary five pupils taught by penchant teachers having flair for mathematics and pupils and that of those who learned under inept teachers having flair for mathematics only.

Table iii: mean achievement scores of pupils by teachers with flair for mathematics only

Group	N	X	SD	DF	A	TC	tt
Penchant	13	48.1	4.6	25	0.05	0.940	1.708
Inept	14	46.6	3.9				

Again, there is significant difference between the achievements of pupils taught by penchant teacher having flair for mathematics. From the mean scores, the pupils under penchant teachers (48.1) performed better than their counterparts (46.6) under the inept teachers.

4.   Findings

1. Given equal enabling environment for teaching and learning of mathematics in primary school, the factor critical to achievement by learners is the teacher quality and disposition to relate with the children. The group studies were taught by teacher who love teaching with computer and love teaching mathematics. The major difference is   in the flair for teaching young children.
2. We found that the proportion of teachers who love using computer is almost the same among the teachers. It follows that the significant difference in pupils'achievement is basically the relationship between teachers and learners.
3. Virtual all those who love teaching mathematics love using computer in doing so.

4.1 Discussion

The level of interaction between teachers and learners in classroom was found to be very crucial. Specifically, the rapport practices identified as the teacher penchant for associating with young learners has proved to be significant. Using computer as media   for communication and interaction in manipulative form

added to the enhancement in; learning of mathematics among young learners.

The major problem identified include lack of computer for instruction, incompetence of some teachers in using computer and the inept of teachers to devote time for children and creating good rapport practice. In addition, we noted that since every primary school teacher teach mathematics, many of them do not have flair for the subject thereby leaving learners to have grandiose of difficulty in learning mathematics, even with computers. We can say that teachers and their relationship with learners in the class in the pivot for enhanced learners in mathematics. The teachers should dare to engage in extra role-playing as parents to help the learners and children develop confident in their teachers as co-participants in the learning setting.

One more difficulty in teachers simulating "parenthood-care" toward the young learners is; not all parents relate cordially with their siblings. Many teachers lack, naturally, the habit of loving young children. Therefore to start taming our teachers to become penchat requires special curriculum and training. Even then, many would not see the need for this. That notwithstanding, it is necessary that classroom teachers love their subject and children. Teachers who will be found wanting in flair for their subject and young children should leave the teaching profession, especially at primary school level.

5.0   CONCLUSION

The studying was aimed at the scenario expected in primary school where ICT tool are functional for effective mathematics teaching and learning. It was intended to promote compliance with ICT policies for effective teaching and we found that many schools do not have computer for teaching mathematics. The implication of this persisting poor achievement in mathematics by children is that many will avoid doing mathematics later in life.

In conclusion the following recommendations are made.

a.   It is recommended that all primary schools should ensure teachers of mathematics are exposed information and communication technology (ICT) facilities to be more efficient.

b.   It is recommended that primary school teachers be evaluated in their disposal for loving the children they teach to ensure that good rapport practice exist between them and the learners.

c.   It is recommended that the penchant teachers be accorded priority attention in their request for Instructional materials since they are likely to produce better result than their counterpart inept teachers.

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