

Parental Influence On Academic Performance Of Secondary School Students In Mathematics In Ilesa West Local Government Area Of Osun State

Adegoke, S. K. (Ph.D.)

*University Of Ilesa, Ilesa,
Osun State – Nigeria*

Folorunso, J. O. (Ph.D.)

*University Of Ilesa, Ilesa,
Osun State – Nigeria*

Abstract

The study investigated the influence of parents on the academic performance of students in mathematics in Ilesa West local government area of Osun state; examined the influence of educational standard of parents on the performance of students in mathematics. The study further examined and investigated the influence of hereditary factors of parents on the performance of students in mathematics. These were with a view to reducing the rate of failure of secondary school students in mathematics in the study area. The study adopted descriptive survey research design. The population of the study comprised all the 25 principals, 275 teachers and in secondary school students in Ilesa West Local Government Area of Osun State. The sample of the study consisted of 24 teachers and 7 principals randomly selected from 7 randomly selected secondary schools out of the existing 25 secondary schools in the local government area. The instrument used to collect data for the study is questionnaire titled “ Parental Influence and Academic Performance of Secondary School Students in Mathematics Questionnaire” (PIAPSSSMQ). The questionnaire has two sections; Section A and Section B. section A was designed to elicit demographic information from the respondents. Section B was used to gather information on parental influence and academic performance variables. Split half reliability method was used in order to ensure the reliability of the instrument. The reliability coefficient of $r = 0.88$ was obtained. The study showed that parents have significant influence on academic performance of secondary school students in Ilesa West Local Government Area of Osun state. It was also revealed that the parent has a tremendous effect on the performance of the students in mathematics. The amount of income earned by the parents and the financial instability determine the level of success of their children in Mathematics. Based on the findings of the study, the study recommended among other things that Federal, State and Local Ministry of Education should organize seminars and conferences on the role of parents on the academic performance of students in mathematics.

Keywords: Parental influence, academic performance, secondary school, students, mathematics.

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I. Background to the Problem

Mathematics is the subject that deals more with numbers and figures in which case, special attention is required both to teach and learn. It is one of the popular subjects taught in schools. According to Odeyemi (1985) and Akinsola (1994), one of the most common comments about Mathematics is that, it is difficult to understand and learn. Some even say they develop fever when they hear the word 'Mathematics' while some perceive Mathematics as magic, also, some have concluded that only the fitted ones could be Mathematicians.

Because of all these comments and assertions, the fear is already created in an average human being while the students enter into secondary schools with all these beliefs, would definitely jittery of the subject and this would no doubt have an adverse effect in their performances in mathematics in the school. The hatred created for the subject will no doubt have a multiplier effect on the teachers teaching the subjects. Esan (1999) highlighted several factors that might have been responsible for the development. For example, personal interest, academic background of the child, the socio-cultural and economics set up of the home are factors that could influence the education of the child either jointly or individually according to Esan (1999). Apart from all the factors highlighted above, personal or home-induced educational problems may affect the level of achievement in and attitude towards particular subject.

Mathematics may be regarded simply as the study of quality form, arrangement and magnitude either in the abstract sense known as pure Mathematics or in the practical connection known as applied Mathematics. By direct interpretation, Mathematics is seeking from the rationale behind the inclusion of the subject in schools or colleges curriculum (Fabunmi, 1980).

In any society, parenthood has the major responsibility for child rearing. The various activities of the child, starting from the birth to the schooling age are controlled and monitored by the parent especially, the mother (Murray, 1992).

It has been stated elsewhere that:

"when children start learning, it must be treated as a complex process beginning at birth which involves the learner with a teacher in an educational institution, such as school and also with his socio-economic background at home".

From the above assertion, it can be inferred that a child's education begins at home and not in school. From their birth until; their first day at school, they would be under their parents care. During this period, a lot is learnt through the process of socialization.

Parent refers to one who has begotten offspring or occupies the role of mother or father as parenthood. In Western society, parenthood with its several obligations rest strongly on biological relatedness, that is, sexual reproduction. This is not the case in all societies, in some, a distinction is made between a biological parent and social parent, with the former producing child and later raising the child and acting as a mother or father in as effective or legal sense as biological parents are expected to do in Western society. This distinction is common in the case of fathers and anthropologists have developed appropriate terms; a "genitor" is a biological father and a "pater" is a social one (The New Encyclopedia Britannica, 1990).

The most important thing is that a child should have good experience mainly through observation and play. Unfortunately, the child does not get enough of those experiences at home.

There have been a cry over the state of performance of students in the secondary schools and one wonders what might have been the cause of these poor performance in spite of the huge amount being expended on education yearly. Most researchers (Odeyemi, 1985; Akinsola, 1994; Olosunde, 2002) are of the view that parents among others do responsible for the low performance of students in Mathematics).

The present study therefore examined the parental influence on academic performance of students in mathematics.

Statement of the Problem

Many young learners perform very poorly in mathematics due to one factor or the other, thereby limiting their career prospects to areas that demand little knowledge of mathematics.

Today in Nigeria, as a result of the social, political and economic changes, taking place in our society, many parents ignore the age long responsibility of impacting early childhood education to their children at home. These parents have shifted their parts of these responsibilities to the school. Most parents that are government workers have for differing reasons have little time for their children. These grow up either as conceited little barons, or on the other hand, as street fighting youngsters who have forsaken the society from the work "go": Outside the home, worthy examples by elders and learners is scarce. With this observation it is clear that parents have a great influence on the academic performance of their wards, especially, in subject as Mathematics. Hence, the need to examine the parental influence on academic performance of secondary school students in mathematics in Ilesa west local government area of Osun state.

Objectives of the Study

The main objective of the study is to investigate parental influence on academic performance of secondary school students in mathematics in Ilesa west local government area of Osun state this is with a view to reducing the rate of failure of secondary school students in mathematics in the study area.

The specific objectives of the study are to:

- a) investigate the influence of parents on the academic performance of students in mathematics in Ilesa West local government area of Osun state ?
- b) examine the influence of educational standard of parents on the performance of students in mathematics in Ilesa West local government area of Osun state ?
- c) examine the influence of family background on the performance of students in mathematics in Ilesa West local government area of Osun state ?
- d) investigate the influence of hereditary factor of parents on the performance of students in mathematics in Ilesa West local government area of Osun state ?

Research Questions

For the purpose of this study, the following questions were raised:

1. What are the influence of parents on the academic performance of students in mathematics in Ilesa West local government area of Osun state?
2. What are the influence of educational standard of parents on the performance of students in mathematics in Ilesa West local government area of Osun state?
3. What are the influence of family background on the performance of students in mathematics in Ilesa West local government area of Osun state?
4. What are the influence of hereditary factor of parents on the performance of students in mathematics in Ilesa West local government area of Osun state?

Hypothesis

One null hypothesis was formulated and tested at <0.05 level of significance

H_{01} : There is no significant difference in the mean response on the influence of parents on the performance of students in mathematics.

II. Methodology

The study adopted descriptive survey research design. The population of the study comprised all the 25 principals, 275 teachers and in secondary school students in Ilesa West Local Government Area of Osun State. The sample of the study consisted of 24 teachers and 7 principals randomly selected from 7 randomly selected secondary schools out of the existing 25 secondary schools in the local government area. The instrument used to collect data for the study is questionnaire titled “ Parental Influence and Academic Performance of Secondary School Students in Mathematics Questionnaire” (PIAPSSMQ). The questionnaire has two sections; Section A and Section B. section A was designed to elicit demographic information from the respondents. Section B was used to gather information on parental influence and academic performance variables. Split half reliability method was used in order to ensure the reliability of the instrument. The questionnaire was trial tested on 5 sampled teachers and 2 principals within the population but outside the sampled respondents. The reliability coefficient of $r = 0.88$ was obtained. This reliability coefficient is considered high enough. Therefore, the instrument was found to be reliable. The questionnaire was administered on all the principals and mathematics teachers (who are parents) in all the secondary schools selected in Ilesa West Local Government Local Government Area of Osun State. All the copies of the questionnaire administered by the researchers through personal contact were returned. This represent 100% return rate.

The information gathered from the questionnaire by the researchers were presented in 4 Likert type scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

The mean of each type of responses to a given item as worked out in relation to the total number of responses to a given items. The ground mean was also calculated and these form the basis for drawing conclusion. Also, one null hypothesis was tested at $0 < .05$ level of significance. This value was obtained after knowing the mean, standard deviation and values of each item of the two groups of respondents. The information gathered from the questionnaire were presented in relation to the research questions.

Research Question One

RQ 1: What are the influence of parents on the academic performance of students in mathematics in Ilesa West local government area of Osun state?

In order to answer this question, items 1 - 5 of the questionnaire were provided to elicit information regarding the influence of parents on the academic performance of students in mathematics. The responses of the respondents (i.e. the principals and mathematics teachers) who are parents are represented in Table 1.

Table 1: Mean computation of the influence of parents on the academic performance of students in mathematics

S/ N	Item	XP	XT	Grand mean	Remark
1	The amount of income earned by the parents determined the performance of the children in school especially in mathematics	3.57	3.58	2. 43	Disagree
2	The financial instability of the parent usually affect the academic performance of the children in mathematics	3.57	4.0	3.81	Agree
3	The parental status in procuring the necessary services in mathematics for their children in the subject	4.49	3.67	3.98	Agree

4	Poor monitoring by the parents on the education of their performance in mathematics	1.71	2.29	2.0	Disagree
5	Students from rich home perform better than students from poor home in mathematics	1.71	2.29	2.0	Disagree

Key:

XP = Principals' means score obtained

XT = Teachers' mean score obtained

Table 1 shows mean computation of the influence of parents on the academic performance of students in mathematics. From the Table, the respondents were disagreed on items 1, 4 and 5 whereas, their responses were in the affirmative on items 2 and 3.

On individual group basis, the principals agreed that the financial ability and status of the parent do affect the performance of their children in mathematics. On the other hand, the teachers agreed that parental monitoring helps the performance of the students in mathematics. They also disagreed that the students from the rich home performs better in mathematics than the students from poor home.

Research Questions 2

RQ 2: What are the influence of educational standard of parents on the performance of students In mathematics in Ilesa West local government area of Osun state?

In answering this question, items 6-10 of the questionnaire were provided to elicit information's as regards the influence of educational standard of parents on the performance of students in mathematics. The responses of principals and teachers are presented in Table 2.

Table 2: Mean computation of the influence of educational standard of parents on the performance of students in mathematics

S/N	Item	XP	XT	Grand mean	Remark
6	Students from educated home always perform better than students from uneducated home in mathematics	3.43	2.79	3.11	Agree
7	Students from illiterate parent but was developed by educated people perform better in mathematics than students who was developed by uneducated parents.	3.57	4.0	3.81	Agree
8	The higher the education of a parent, the better the performance of the children in mathematics	2.29	2.50	2.40	Disagree
9	The intelligent quotient (i.e.) of the parent determines the success of their children in mathematics	3.14	3.39	3.22	Agree
10	The education and performance of the child in mathematics start from education of the parent	3.14	3.29	2.22	Agree

In Table 2, the respondents (i.e. the principals and teachers) agreed on items 6, 7 9 and 10 but disagreed on item 8.

On individual group basis, the principals agreed that the intelligent quotient of the parents do influence the performance of the students in mathematics. They disagreed that the higher the education of the parents, the higher the performance of the children and observed also that the educational background of the parents positively

influence that of the children in mathematics.

The teachers on the other hand, agreed that students from illiterate parents but were developed by educated people perform better in mathematics. They disagreed that the level of education of their parents may not influence the performance of students in mathematics.

Research Questions 3

RQ 3: What are the influence of family background on the performance of students in mathematics in Ilesa West local government area of Osun state?

In order to answer this question, items 11 - 15 of the questionnaire were provided to elicit information' regarding the family's background effect on the performance of students in mathematics. The responses of the respondents (i.e. the principals and teachers) are presented in the Table 3.

Table 3: Mean computation of the influence of family background on the performance of students in mathematics

S/N	Item.	XP	XT	Grand mean	Remark
11	The separation between father and mother affect the academic performance of their children in mathematics	3.14	3.67	3.41	Agree
12	Students from a worse home cannot cope well in mathematics	2.14	2.63	2.39	Disagree
13	Students from monogamous family always perform better in mathematics	3.49	2.38	2.14	Disagree
14	Students from polygamous or extended family always perform poorly in mathematics	1.86	1.96	1.91	Disagree
15	Homes where there are frequent fighting, chaos, misunderstanding and lack of peace between the father and mother will strictly affect the academic performance of their children in mathematics	4.29	3.50	3.90	Agree

From Table 3, the respondents agreed on items 11 and 15 but disagreed on items 12, 13 and 14.

Research Questions 4

RQ 4: What are the influence of hereditary factors of parents on the performance of students in mathematics in Ilesa West local government area of Osun state?

In answering the question, items 16-20 were provided to elicit information regarding the influence of hereditary factors on the performance. Responses are provided in the Table 4.

Table 4: Mean computation of the influence of hereditary factors of parents on the performance of students in mathematics

S/N	Item	XP	XT	Grand mean	Remark
16	Students with intelligent parents will always perform better in mathematics	3.71	3.54	3.63	Agree
17	Student from mentally retarded parents usually lack behind in	3.71	3.17	3.44	Agree

	their performance in mathematics				
18	Some inherited characters like height colour and body deformation affects the performance of the students in mathematics.	2.29	2.21	2.25	Disagree
19	Students who has inherited sickle cell Anaemia usually lack behind in their performance in mathematics	2.29	2.21	2.25	Disagree
20	Transmission of some genetically values like eye defect,	4.14	3.67	3.91	Agree

The respondents agree on items 16, 17 and 20 and disagreed on items 18 and 19.

Test of Null Hypotheses

Ho₁: There is no significant difference in the mean response on the influence of parents on the performance of students in mathematics.

The computerized (i.e. obtained) t-values of the responses of the respondents (i.e. principals and mathematics teachers) who are parents in relation to each item are as shown in

Table 5: T-test statistics of difference in the mean response on the influence of parents on the performance of students in mathematics.

S/N	ITEM	Decision	XP	XT	PSD ₁	TXD ₂	T-CAL	TTB
1	The amount of income earned by the parent determined the performance of the children in school mathematics	Accept	3.57	3.58	1.15	1.64	0.02	2.05
2	The financial instability of the parent usually affect the academic performance of the children in mathematics	Accept	3.57	4.04	0.79	1.20	1.21	2.05
3	The parental status in procuring the necessary services in mathematics for their children in the subject	Accept	4.29	3.67	0.76	1.20	1.21	2.05
4	Poor monitoring by the parents on the education of their performance in mathematics	Accept	4.71	3.33	0.49	0.87	1.58	2.05
5	Students from rich home perform better than students from poor home in mathematics	Accept	1.71	2.29	0.76	0.91	-1.76	2.05
6	Students from educated home always perform better than students from uneducated home in mathematics	Accept	3.43	2.79	1.40	1.49	1.05	2.05
7	Students from illiterate parent but	Accept	3.71	3.33	3.38	1.20	0.67	2.05

	was developed by educated people perform better in mathematics than students who was developed by uneducated parents							
8	The higher the education of a parent, the better the performance of the children in mathematics	Accept	2.29	2.50	1.50	1.38	-0.33	2.05
9	The intelligent quotient (i.e.) of the parent determines the success of their children in mathematics.	Accept	3.57	3.92	1.27	1.10	-0.66	2.05
10	The education and performance of the child in mathematics start from education of the parent.	Accept	3.14	3.29	1.81	1.37	-0.26	2.05
11	The separation between father and mother affects the academic performance of their children in mathematics	Accept	3.14	3.67	1.46	1.33	-0.25	2.05
12	students from a worse home cannot cope well in mathematics.	Accept	2.14	2.63	1.21	1.31	-0.92	2.05
13	Students from monogamous family always perform better in mathematics.	Accept	2.43	2.38	1.40	1.24	0.09	2.05
14	Students from polygamous or extended family always perform poor v in mathematics	Accept	1.86	1.96	1.21	0.81	-0.20	2.05
15	Homes where there are frequent fighting, chaos, misunderstanding and lack of peace between the father and mother will strictly affect the academic performance of their children in mathematics.	Accept	4.29	3.50	0.49	1.38	2.39	2.05
16	Students with intelligent parents will always perform better in mathematics.	Accept	3.71	3.04	1.89	1.44	0.22	2.05
17	Student from mentally retarded parents usually lack behind in their performance in mathematics	Accept	1.57	2.25	0.79	1.11	-1.81	2.05
18	Some inherited characters like height colour and body deformation affects the performance of the students in mathematics.	Accept	3.71	3.17	0.49	1.54	-1.21	2.05
19	Students who has inherited sickle cell Anaemia usually lack behind in	Accept	2.29	2.21	1.25	1.06	0.15	2.05

	their performance in mathematics.							
20	Transmission of some genetically values like eye defect, mongolism, deafness. usually affect the performance of such students in mathematics.	Accept	4.14	3.67	0.38	1.17	1.68	2.05

Table 5 shows Item by item analysis of the view of the two group respondents (i.e. the principals and mathematics teachers as parents) yielded various computed t-value as against the table value. Out of the twenty items, nineteen has computed t-value less than table t-values, while only one item 15 had computed t-value higher than the table t-value.

III. Summary of Findings

The findings of the study showed that:

1. financial instability of the parent usually influence the academic performance of children in mathematics.
2. parental status in procuring the necessary material in mathematics for their children determines the performance of such children in the subject
3. poor monitoring by the parents on the education of their children usually influence their performance in mathematics.
4. students from illiterate parents but brought up by educated people perform better in mathematics than students who are brought up by uneducated parents.
5. intelligent quotient of the parents determines the success of their children in academic endeavours particularly, in mathematics.
6. home where there are frequently fighting, and lack of peace between the parents will influence the academic performance of their children in mathematics.
7. students with intelligent parents will always perform better in mathematics
8. students from mentally retarded parents usually lack behind in their performance in mathematics
9. transmission of some genetically values like eye defect, mongolism, deafness, usually influence their performance of such students in mathematics.
10. separation between father and mother affect the academic performance of their children in mathematics.

IV. Discussion and Findings

The study investigated the parental effect on the academic performance of students in mathematics. In doing this, four research questions were raised and one null hypothesis was formulated. It was discovered that the failure of most students in school especially in mathematics is due to the influence of the parents and not only from the teachers or school authority. The parental status in procuring the necessary materials in mathematics for their children determined to a very large extent, the performance of such children in the subject. The level of educational standard and background of the parent also determined the performance of such children in the subject. In addition, the hereditary factors of the parents and many others variables determine the level of success of the students in mathematics. The findings corroborate the findings of Odeyemi (1985), Akinsola (1994), Olosunde (2002), Esan (1992), Fabunmi (1980) and Murray (1980).

V. Conclusion and Recommendations

The study concluded that parents have roles to play on the academic performance of their children in school especially, in mathematics. Based on the findings of the study, the following recommendations are therefore put forward for consideration

1. Federal, State and Local Ministry of Education should organize seminars and conferences on the role of parents on the academic performance of students in mathematics.
2. The school authority, principals, counselors and class teachers should give adequate report of each student to their parents.
3. Parent should try as much as possible to give the right training to their children from infants especially mothers.
4. The government should provide more trained counselors so that each school would be able to have at least a counselor who will be more familiar with the pupil's parents.
5. Parents should ensure that their wards are not just transferred from one school to the other often by often. Where this is done, teachers should ensure that the records of the affected students are transferred to the schoolmaster or counselor.

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