

**SOME CAUSES OF POOR PERFORMANCE  
OF PUPILS IN PRIMARY SCHOOL MATHEMATICS.**

A CASE STUDY IN AKAMKPA LOCAL GOVERNMENT AREA OF CROSS RIVER  
STATE, NIGERIA.

A RESEARCH PROJECT

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## CERTIFICATION

I certify that this research project was carried out by **OWAN, VALENTINE JOSEPH** with matriculation number, CRSCOE/SS/2009/1057, of the department of **MATHEMATICS/ECONOMICS**, Cross River State College of Education, Akamkpa.

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**DEDICATION**

This project is dedicated with much love and appreciation to the Almighty God and also to my beloved parents Mr/Mrs. Owan Joshua N. and to my uncle pastor Steve Owan Eka

**TO GOD BE THE GLORY!**

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**Abstract**

*The aim of this research was to x-ray some causes of poor performance of pupils in primary school mathematics. Specifically, the study examined the use of instructional materials and pupils' academic performance in mathematics; parents' socio-economic background and pupils' academic performance in mathematics; compared the performance of private and public primary school pupils in mathematics; examined ways in which teachers contribute to pupils' poor performance in mathematics. The study employed a correlational and quasi-experimental research designs. A simple random sampling technique was used to select a sample of 270 pupils and 45 teachers drawn from nine primary schools in Akamkpa local government area of Cross River State. A questionnaire and a mathematics achievement test (MAT) were instruments used for data collection. The collected data was analysed using a simple percentage (%) and arithmetic mean ( $\bar{X}$ ). The findings of the study revealed that the use of instructional materials adequately led to pupils' poor performance in mathematics; parents' socio-economic status contributed to the pupils' performance in mathematics; pupils in private primary school perform better than their colleagues in public schools in mathematics; and teachers contribute to the poor performance of pupils in mathematics. Based on this results, conclusions and recommendations were made.*



**CHAPTER FOUR: DATA ANALYSIS/RESULTS AND DISCUSSION OF FINDINGS**

Hypothesis by hypothesis, presentation of result	--	--	--							49
Discussion of findings	--	--	--	--	--	--	--	--	--	53

**CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

5.1	Summary	--	--	--	--	--	--	--	--	--	56
5.2	Conclusion	--	--	--	--	--	--	--	--	--	56
5.3.	Implication of the study	--	--	--	--	--	--	--	--	--	57
5.4	Recommendation	--	--	--	--	--	--	--	--	--	58
5.5	Suggestions for further studies				--	--	--	--	--	--	59

REFERENCES

APPENDICES

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Mathematics is a subject that affects most aspect of human life to a greater extent. The social, socio-economic, scientific and technological aspect of man is centred on numbers- disciplines where numbers are predominant and form an integral part of mathematics include: statistics, accounts, engineering etc. because all the above mentioned disciplines used numbers to analyse, and synthesize data in order to bring out a clear understanding of what they are doing and making sure that these data are treated properly. For example, the earlier civilization of mankind came through mathematical manipulations. The inter-relationship between mathematics, development and advancement of human shows the importance of mathematics in life due to its numerical and symbolic nature, it is more related to the scientific and technological facets of man's world than to any other aspect as it occur and re-occurs in the physical and natural sciences.

Accordingly, (Encyclopaedia of Education, 2003). Mathematics plays a vital role in the modernization of this civilization. It is everywhere and affects the everyday lives of people. Although it is abstract and theoretical knowledge, it emerges from the real world. Mathematics is one of the essential and basic areas of the college curriculum which has a wide field of subject matter. In education, mathematics plays an important role. It is the study of numbers, the relationship between these numbers and various operations performed on them that makes mathematics a very unique subject. Richard (2000), "Nature talks to us in the language of mathematics, that is numbers, mathematical rules and equation helps us to know the world around us.

The continued pupils' poor performance in the subject in the subject is now a problem of national interest, concerning parents, teachers and educational planners in finding



solutions to this downward trend in mathematics performance. Hence the rationale to carry out this study is in perspective and interesting. Pupil's poor performance in the first school leaving certificate examination showed that much still need to be done to reverse this situation. And also, the rate at which pupils are afraid of the subject is a situation that if not properly handled can cause more damage and problems to pupils. Poor performance in mathematics over the years has been attributed to the fact that the subject is difficult. It has been discovered that pupils show approach towards the study or learning of mathematics show the anxiety and fear in them.

This study therefore sought to provide some factors responsible for poor performance of pupils in primary school mathematics in Akamkpa Local Government Area of Cross River State. Due to the poor pupils' performance in mathematics, it is pertinent to look at some of this factors responsible for this performance. Since mathematics is a very important subject in human life, it would be better to test and see how the society can help improve the standard of teaching and learning mathematics in our primary schools.

## **1.2 Statement of the Problem**

In an ideal situation, schools were supposed to achieve their primary goals of teaching and learning through improved academic performance of students. Pupils were supposed to possess basic literacy and numeracy skills before venturing into secondary schools.

Unfortunately, this is not the case in Akamkpa Local Government Area where many pupils cannot read nor write. Many of them cannot carry out their assignments without their parents' intervention. There is also persistent poor performance of pupils in Akamkpa Local Government Area of Cross River State. Many pupils cannot write their common entrance

examinations on their own and pass. Most teachers and parents assist their children in writing such examination.

There have been numerous research work to establish the reasons for poor performance in mathematics, up till date the problem remain unchanged. Many findings assert that unfortunate methods of teaching and inherent fears attached to mathematics on the part of pupils further emphasize the problems of mathematics. However, certain factors have been identified as the cause of pupil's poor performance in mathematics. These factors include: teachers qualification, fears on the part of the pupil's, teaching methods adopted by mathematics teachers etc. these factors are opinion-based, even than research efforts are headed to confirm such opinions. It is on this note the researcher considered it pertinent to investigate the causes off pupils' poor performance in mathematics in Akamkpa Local Government Area of Cross River State.

### **1.3 Purpose of the study**

The main purpose of this study was to x-ray some of the problems causing pupils' poor performance in primary school mathematics. This study was aimed and designed specifically to:

- i. Examine the use of instructional materials and pupils' academic performance in mathematics.
- ii. Examine parents' socio-economic background and pupils' academic performance in mathematics.
- iii. Compare the performance of private and public primary school pupils in mathematics.
- iv. Examine ways in which teachers contribute to pupils' poor performance in mathematics.

#### **1.4 Research Questions**

The following research questions were posed to guide the study.

- i. To what extent do the use of instructional materials affect pupils' mathematics performance?
- ii. To what extent does parent socio-economic status affects academic performance of pupils in mathematics?
- iii. What is the difference in the performance of private and public primary schools pupils in mathematics?
- iv. In what ways do teachers contribute to pupils' poor performance in mathematics?

#### **1.5 Significance of the Study**

It was expected that the finding of this study may be significant in the following ways:

- i. The findings of this study may be useful to teachers in order to adopt teaching techniques which are likely to yield better results in mathematics
- ii. It may be useful for pupils to identify the causes of their poor performance in mathematics and to create an avenue for subsequent improvement.
- iii. The findings may enable parents to understand and play their roles properly towards their children's performance in mathematics.
- iv. The findings may constitute the basis for further researches in this area or related areas. It may also serve as a good source of literature to researchers and scholars.

#### **1.6 Scope of the study**

The study was conducted in 2012, and was bounded or delimited geographically, to Akamkpa Local Government Area of Cross River State. The investigation was delimited to nine public and private primary schools in Akamkpa Local Government Area.

However, it is assumed or hoped that most (if not all) the causes of poor academic performance of pupils in primary school mathematics are also applicable to other levels of the school systems which includes both the secondary and tertiary levels. The variables to be used in the study are performance and causes in which the dependent variable is performance and the independent variable is causes. The sub-variables of the independent variable include use of instructional materials, parents' socio-economic status, and teachers' contribution.

### **1.7 Definition of terms**

The terms defined here were based on their usage in the study, and include: teaching, performance, academic performance, and socio-economic background.

- 1. Teaching:** this may be defined as the act of imparting knowledge to other people.
- 2. Performance:** this refers to the results, outcome or output one gets from doing a particular thing whether good or bad.
- 3. Academic Performance:** in this study, academic performance is the outcome of education or the extent to which a student, teacher or institution has achieved their educational goals.
- 4. Socio-economic background:** this may be defined as an economical and sociological combined total measure of a person's work experience of an individual or family economic and social position in relation to others based on income, education and occupation.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0. Introduction**

The problems/causes of poor academic performance in primary school mathematics is simply the problem of mathematics education in general. As a matter of fact, mathematics education is not a job of one person. It is a combined effort of both the learners, teachers, parents, government and even the society. Suffice it therefore to infer that most (if not all) of the causes of poor academic performance in primary school mathematics particularly and in higher school in general is centred on the above mentioned group of persons. They can cause the promotion and/or the retardation of the general students' performance in mathematics and even other school subjects.

Care must therefore be taken by all these groups in educating the child, mathematically, the poor mathematics performance of pupils is evident in the first school leaving certificate examination. This chapter is aimed at reviewing the related literature in the subject of study to facilitate the understanding of the issues involved. The chapter is sub divided into the following:

1. Pupils attitude towards the learning of mathematics
2. Teachers professional qualification
3. The use of teaching aid in mathematics parental involvement
4. Parental involvement
5. The head teacher and his administration
6. Environmental influence
7. Government/political influence
8. Parents socio-economic status and performance in mathematics

## **2.1. Pupils Attitude towards Learning Mathematics**

It has been observed that pupils' performance in mathematics is very low and that pupils poor performance in mathematics result from themselves. No pupil is ever ready for a mathematics class. Even the psychological state of the child who is in class causes a great deal of laxity. There is always the fear in them that mathematics is difficult. It is also clear that pupils' don't have time to go through their mathematics notes (or textbooks) after the actual mathematics lesson at home. Attitude towards mathematics has been considered an important factor influencing participation and success in mathematics.

Weidmann and Humphrey (2000), states that investigation into students mathematics attitude and perspective not only informs teachers, parents and administrators about students need, but also serves as a catalyst for reform in mathematics education. There is a research showing evidence that students' high performance in mathematics and mathematics learning. Mullis (2000) reported that gender difference in attitude towards mathematics influenced some researchers to study some affective variables as mediators of gender differences in mathematics achievement.

Papanastasiou (2000), opined that even among those students that found a significant relationship between pupils' attitude and their performance in mathematics, there was still a controversy regarding the educational implications of the results. For example, some researchers concluded that although statistically, the mean effect size for the relationship between attitude towards mathematics and achievement in mathematics was strong enough to have useful implications for educational practice.

Cote and Levine (2000); Singh, Granville and Dika (2000); and Tymms (2001) investigated 21,000 students attitude towards mathematics and suggested that the most important factors were the teacher and student academic level, while age, gender language were weakly associated with attitudes. The study of Webster and Fisher (2000), revealed

that rural and urban students attitude in mathematics and career aspiration, positively affected their performance. Alternat, Momoa, Indoshi, and Olhuon (2000) found that students' attitude changes could be predicted and influenced by types of classmates. The students' attitude towards an academic subject is a crucial factor in learning and achievement in that subject may be an important factor in his or her academic achievement.

According to Schieber (2000) those who have positive attitude towards mathematics have a better performance but did not consider students attitude. Kamla-Raj (2009), in his study of students performance in Junior Secondary Mathematics found out that student poor performance in mathematics in junior secondary school examination was high, male students performed better than female, students from rural schools performed better than students from urban schools in mathematics, and also students from private schools performed better than students from public schools.

Furner and Duffy (2002) found out that, the effect of math anxiety where felt more among students with inadequate high school mathematics backgrounds and that mathematics anxiety was related to low mathematics achievement test scores and high level of test anxiety.

## **2.2. Teachers Professional Qualification**

A teacher is expected to be competent before teaching a particular subject. The purpose of mathematics teacher education is to provide good teachers to teach mathematics and related courses. Teachers do not only need understanding of the subject they are teaching, but also need some understanding of the structure of mathematics and why the learning of mathematics is important. Most pupils perform poorly in mathematics because of inadequate mathematics teachers in our primary school system. A number of studies

have examined the ways in which teachers highest qualifications correspond positively with students' achievement for instance.

Betts, Zau and Rice (2003), found that when teachers have an advanced degree in their teaching subjects, it will have a positive impact on the students achievement. Thomas and Raechelle (2000), suggested that several other studies in the teacher preparation research have also shown a positive connection between teachers subject majors and students achievement in mathematics. Wilson and Floden (2003), found that students of mathematics teachers with mathematics education degrees demonstrate higher academic achievement in mathematics. However, they also indicated that there might be a limit at which more mathematics knowledge does not help the teacher. Darling-Hammond (2000), found that one having a major in his/her teaching subject was the most reliable predictor of students achievement score in mathematics and science.

Welingsky (2000) said that mathematics teachers having a major in mathematics correlated with higher students' achievement in mathematics. However, a number of studies found years of experienced to positively correlate with students achievement for example, Betts Zau and Rice (2003 found that teachers experience significantly correlates with students achievement in mathematics. A report by the Center for Public Education (2005) stated that research has been consistent in finding positive correlation between teaching experience and higher student achievement. Rivkin, Hanushek and Kain (2005), showed that students of experienced teachers achieved better that students of new teachers (those with one to three years of experience).

Similarly, Rosenholts (1989), quoted in Darling-Hammond (2000), and Hawkins, Stancavage, and Dossey (1998) found teaching experience to be related to students achievement but that the relationship may not be linear, students of teachers who have fewer years of experience (less than 5 years) has lower levels of mathematics achievement



but there were no difference in mathematics achieving among students whose teachers had more than five years of experience the implication of that is that the benefit of experienced level of after five years of experience. The curve-linear effect according to Darling-Hammond (2006) could be because older teachers do not continue to grow and learn and may grow tired of their jobs. It has been revealed that teachers' professional development affects pupils' performance in mathematics because teachers develop new knowledge, skills, approaches and disposition to improve their effectiveness in their classroom.

Cohen and Hill (2001) found that teachers whose professional development focused directly on the curriculum they would be teaching are the ones that adapted practice they were taught in the professional development interventions and that their students did well on assessment. Similarly, Garet (2001), found that when teachers' professional development is linked directly to their daily experiences and aligned with standard and assessment they would be more likely to change their instructional practice and gain greater subject matter knowledge and improved teaching skills.

Other researchers have shown the usefulness of teaching practice and its influence on pupils' academic performance in mathematics. Wenglinsky (2002), in his study, about the relationship between teaching practice and students' academic achievement, reported that teaching practice are important causes of students learning and achievement. Also, that regardless of the level of preparation students brings into the classroom (e.g. student socio-economic status), teachers teaching practice can either greatly, facilitate students learning practices play an important role in student cognitive development. Bransford, Brown and Cocking (1999), indicated that there are ways students are taught a subject such as mathematics that makes it possible for the majority of students to develop a deep understanding of important subject matter.

Similarly, the research finding of Grouus and Cebulla (2000) on improving students achievement in mathematics showed that certain teaching practices (like whole class teaching, whole class discussion and cooperative group work) are worth careful consideration as teachers strive to improve their mathematics teaching practice. Hafner, (1993); Grouu, and Cebulla (2000); Ingvarson (2004), found that teaching practices that generate high opportunity to learn are related to high achievement in mathematics. Opportunity to learn refers to equitable conditions or circumstances within the school or classroom that promote learning for all students. It includes the provision of adequate instructional experience that enables students to achieve high standards.

Brewer (2000) examined data on the post-secondary degrees and certification status of teachers and their students' performance in mathematics and science. He observed a positive relationship between teachers' degrees and students' performance in mathematics consistent with earlier findings. He also found that students whose teachers were certified in mathematics but did not hold a post perform as well as students whose teachers held a post-secondary degree in mathematics.

### **2.3. The use of Teaching aids (Instructional Materials)**

Teaching aid enhance the memory level of students. At this time, education has spread wide and the entirely oral teaching cannot be the key to success they pedagogy; therefore, the teacher has to use instructional materials to make the teaching-learning process interesting. In view of this, Oladejo, Olosunde and Isola (2011) in their study of instructional materials and those in the conventional instruction. Thus, the students taught with improvised instructional materials obtained the highest achievement score at posttest

( $F=74.94$ ), followed by those with standard instructional materials ( $F=63.07$ ), while the control group scored the lowest ( $F=63.89$ ).

Meremikwu and Obinna (2010), in their study of instructional aids, school variables and pupils achievement in primary schools, found that pupils' mathematics achievement was significantly dependent on the treatment, school type, all the interactions of the treatment, gender, school type and school location were statistically significant in planning pupils mathematics achievement. They also found that in urban areas, pupils in the experiment group in private schools achieved significantly higher than their counterparts in the public schools. Esu (2006), attributed the pupils poor performance in mathematics to factors such as: the notion among pupil that mathematics in an abstract and difficult subject, inadequate qualified teachers to teach the subject as specialist, improper method of teaching mathematics, lack of mathematics laboratory, insufficient instructional aids and poor use of instructional materials. Basically, the goals of teaching mathematics, especially at the primary level is prepare to develop critical and creative outlook as they confront the challenges of daily life.

Meremikwu (2008), thus for the teaching of mathematics to be meaningful, teaching must exist at the concrete operational level. By the nature of children, they need a large number of and variety of educational or instructional resources to interest with children at the primary level like to explore, experiment, create and interact intensively with the environment. The use of copious types of instruction for effective learning of the subject. Okoyeocha (2005), in a comparative study of public and private schools in Nigeria found that public schools were better equipped than their private counterparts. The location of the school could also influence the level of academic achievement of pupils. Anne and Obinna (2010), in their study, showed that on the average pupils in private schools taught with instructional materials perform significantly better than their counterpart in public schools.

Eluwa (2005), also noted in his research that there are higher mathematics averages score for private schools than their counterparts in public schools. It is worth noting that private schools in Nigeria have more effective and efficient supervisory capacity than public schools. There has been a boom in enrolment into private schools in Nigeria as the public school system appears to have bowed to political and economic pressures. Onasanya and Omosewo (2012), in their research on effect of improvised and standard instructional materials on secondary school students' academic performance in physics found the following:

1. There was significantly difference between the students taught with standard instructional materials and those taught with improvised instructional materials i.e mean scores on the post test ( $t=4.09$ ,  $df$  14,  $P=0.05$ ).
2. There was no significant difference between the post test of scores of the experimental group and control group. This shows that the improvised instructional materials in the comparison of the male mean scores of experimental and control groups were the same entry level with regards to academic ability.

Ogunleye (2000); Okonkwo (2000); Mkpanang (2005) and Obioha (2006) reported that there were inadequate resources for the teaching of science subjects in secondary schools in Nigeria. They further stated that where there was inadequate resources for the teaching of science subjects in secondary school in Nigeria. They further stated that where there were little resources at all, they are not usually in good conditions, while the few that were in good condition were not enough to go round those needed them. Hence there is need for improvisation. Obioha (2006) and Ogunleye (2000) revealed that there is a significant difference in the achievement of students taught using standard instructional materials, those with improvised instructional materials and those in the conventional instruction. Omosewo (2008) and Akinsola (2010), considered the human factors as the teachers

professional commitments, are activity, mechanical skills, initiative and resourcefulness. They found that many of Nigerian science teachers were of possibility of improvisation. They also noted that very few teachers practice improvise while majority depend on imported equipment and claim that improvisation is time-consuming and fund depleting. Onasanya (2008), noted that improvisation demands adventures, creativity, curiosity and perseverance on the part of the teacher. The author added that such skills are only realizable through well planned training programmes on improvisation.

Bassey (2002) describes instructional media as system components that maybe used as part of instructional processes which are used to disseminate information, message and ideas or which make possible communication in the teaching-learning process. Experience over the years has shown that teachers have been depending on excessive use of words to express, to convey ideas or facts in the teaching-learning process. This practice is termed the "chalk-talk" method. Today, advances in technology have made it possible to produce materials and devices that could be used to minimize the teachers talking and at the same time, make the message clearer, more interesting and easier for the learners to assimilate. Onasanya (2008). Graphic include charts, posters, sketches, cartoons, graphs and drawings. Graphics communicate facts and ideas clearly through combination of drawings, words and pictures. The use of graphics in teaching creates definitiveness to the materials being studied. They help to visualize the whole concepts learned and their relationship with one another. The role of graphic materials in visual communication in both unique and significant.

#### **2.4. Parental Involvement**

The ability of parents and guardian to audit their children/ward performance in school is very important role because it helps pupils to build themselves up. Since education begins

from home, it will be pertinent for parents to show serious concern over their children performance in school. Parents can assist their children in home works or assignments, paying his school fee early, watch them over keeping bad friends and even monitor that they read and study at home.

In view of this, Gianzero (2001), opined that the term "parent involvement" includes several different forms of participation in education and with schools. He further stated that parents can support their children's schooling by attending school functions and responding to school obligation like parent-teacher conferences. They can further or become more involved in helping their children improve their school work by providing encouragement, arranging for appropriate study time and space, modelling desired behaviours (such as reading for pleasure), monitoring homework and actively tutoring their children at home. He went further to say that outside home, parents can serve as advocates for the school they can volunteer to help out with school activities or work in the classroom or they can take an active role in governance and decision making necessary for planning, developing an education for community children.

Gianzero (2001) reported that family practices of involvement are as or more important either and how students' progress and succeed in school. No one is more than parents in sending signals that reading and education matter and that schools work is not a form of drudgery but a ticket to a better life. By encouraging their children as assisting on home work, parents can set example for their children, which powerful and positive. Gianzero (2001) asserted that when families work together with schools to support learning, children tend to succeed not just in school but throughout life.

Utah Education Association (2008), the cultivation of string family-school linkages is increasingly and widely viewed as an essential component of strategies to improve students' educational outcomes. While researchers acknowledge a strong direct relationship between

socio-economic status (SES) and academic achievement. They also claimed that motivated families regardless of their (SES) can help their children improve school performance through several types of involvement. Research documenting the effects of parental involvement at home and in school concludes that differences in the achievement levels of working class and middle-class children is more explained by the nature of child-parents and parent-school interactions than by characteristics of socio-economic status (SES).

Fan and Chen (2001), in their research showed that parental involvement in their children's learning positively affects the child academic performance. Melhinsh, Sylvia, Sammons, Siray, and Toggard (2001) discovered that parental involvement in children learning leads to higher academic achievement, greater cognitive competences, greater problem-solving skills, greater school enjoyment, better school attendance and fewer behavioural problems at school. Berkely parent Network (2009), asserted that private schools vary widely and the level of parental involvement varies from one parent to the other. What is important is for parents to choose private schools that has characteristics that match with what they are looking for. As a family, parents pay for the cost of educating their children in private schools and therefore tend to become more involved in dictating what the school offer than parents whose children are attending public schools.

Agbatokin (2009), Macmillian (2000) also reported that parental involvement on public school is a strong determinant of school performance as measured by students' scores in achievement test. Thus, the influence of parents in educational process of their children, the importance of parental involvement cannot be over emphasized to make this completely meaningful, both parents should be involved. Gianzero (2001); Olatoyin and Ogunkola (2008) experts in the field agree about the importance of linkages between families and schools. However, researchers in developing countries should now begin to emphasize the

need for more rigorous study to help educators predict the precise outcome of implementing particular strategies for involving families in children education.

## **2.5. The Head Teacher and his Administration**

The performance of a school is appraised against the person and leads and administers it. The head teacher administration can cause the poor performance of pupils in mathematics and may also cause the improved standards of pupils' performance in mathematics. Leithwood, Seashore Louis and Washstorm (2004) make two important claims. First, leadership is second only to classroom instructional among all school-related factors that contributes to what students learn at school. Second leadership effects are usually largest where and when they are needed most. It was suggested that leaders who set a clear sense of direction have the greatest impact. If these leaders help to develop among their staff members a shared understanding of the organization and its goals and activities, this understanding becomes the basis for a sense of purpose of vision.

They effective principals understand direction setting. They know that an investment of time is required to develop a shared understanding of what the school should look like and what needs to be done to get there. They know that teachers and other staff included in identifying goals are much more likely to be motivated to achieve those goals. Wekesa (2003) noted that to improve students' performance, head teachers are realized first to improve the management of the school. This can be done by setting a clean vision for the schools and communicate their vision to students, support its achievement by giving instructional leadership, resources and being visible even part of the institution that account for students performance. Millet (2006) explains that research and inspection clarify the extent to which quality leadership is crucial to improvement. In highly effective schools as well as schools which revealed a trend of poor performance and declining achievement. It



is the head teacher who set the pace leading and motivating pupils and staff to perform to their highest potentials.

According to Cotton (2003), extensive studies demonstrate that particular leadership styles of schools leaders could have positive impact on teaching and learning environments and processes leading to improvement in pupils' performance and academic achievement. According to Sushia (2004), the head teacher is the leader in a school, the pivot around which aspect of the school revolves and the person in charge of every detail of the running of the school be it academic or administrative. The head teacher should be involved in making most of the decision of the school. It is therefore important that the head teacher is a leader, a thinker and a decision maker. A discrete head teacher will employ team work as a working strategy, he will set up committees and smaller groups of members to staff to investigate ideas and strategies.

Leithwood, Seashore Louis, Anderson and Walshstorm (2004) reviewed that researchers are paying close attention to what is being termed a leader's emotional intelligence. His/her ability and willingness to be tuned to employees as people. Recent evidence suggest that emotional intelligence displayed, for example through a leader's personal attention to an employee enthusiasm and optimism, reduces, frustration, transmit a sense of mission and indirectly increases performance of pupils. Riddle (2005), principals can modify organizational structures, for instance by changing schedule to ensure that teachers share common planning time, use time to discuss improving instruction.

Wekesa (2003); Cotton (2003); Gama (2006); Gentilucci and Muto (2007), has asserted that the following types of behaviour by a head teacher have significant impact on students achievement. The establishments of a clear focus on students learning by having a vision and high expectation for learning for all students interaction and cordial relationship with relevant stakeholders with community interaction, emotional and interpersonal support

visibility and accessibility and parent/community participation; developing a school culture, conducive to teaching and learning through shared leadership and decision making, collaboration, risk taking leadership through discussion of instructional issues, observing classroom teaching and giving feedback, supporting teacher autonomy and protecting instructional time; and being accountable for affecting and supporting continuous improvement through monitoring progress and using progress data for programme improvements.

Leithwood, Seashore and Wahlstorm (2004) concluded that the contribution of leadership is second in strength only to classroom impact where it is most needed in the nation's challenged schools. In addition, they cite the need for expanded study of how leadership in other areas of the school community such as teachers' leadership can contribute to student achievement.

Leithwood and Riel (2003); Day (2004); Harri (2004); Hale and Rollins (2006); Gurr, Drysdale and Mulford (2006); Rubertson and Miller (2007); Cuskey (2007); Gentiluccu and Muto (2007), opined that it is clear that the school leadership provided and/or shared by a school administrator is one of the key factors in enhancing school performances and students achievements. The school performances and students achievement. The school leaders in this context are "those persons occupying various roles in the school, who work with others to provide direction and exert influence on person and things in order to achieve the school goals". Harris (2004) asserts that successful leadership in schools have resulted in higher levels of both students' attainment and achievement. Emphasizing the importance of distributed leadership he also points that findings from the studies have identified the limitation of a singular leadership approach in securing school improvements.

Gamage (2009) asserts that it is necessary for a principal to understand who he/she stands along the leadership continuum in leading and managing a school towards improving

students' performance. For this purpose, a head teacher of his position including: (a) the aims and goals which his/her school is attempting to achieve; (b) the means or the resources available to achieve these goals (c) the degree of freedom delegated to him/her by the employing authority to innovate or modify existing educational methods and procedures in order to achieve these goals (d) the legal, tradition and person vested in the role of the principal (e) the constant and boundaries likely to limit school based decision (f) the extent of the head teacher responsibility and accountability for funding, staffing and administration of the school.

## **2.6. Environmental Influence**

Environment as a factor has a vital role to play in the academic performance of pupils. A child who grows up in an emotionally unsound environment might not likely do well in school. Craig (2009), asserted that focus on the pupils' entire academic experience has led to a greater emphasis on their daily life activities and facilities. In response, many campuses are renovating, expanding or creating new buildings that support life. National and local officials are recognizing that school facilities, the physical buildings are important to their programme success. Mahone (1999) and Vaughua (2008), emphasize that more than other building types, school facilities, whose primary function is teaching and learning, have a profound impact on their occupants. They believe that the design and layout of school facilities should possess features that will aid learning and teaching environment should be taken into consideration in various stages of development.

National Academics Press (2006), argued that regardless of the school configuration, children need a healthful and stimulating environment in which to learn, primary schools should be comfortable visually, acoustically and thermally they should have excellent indoor air quality and they should be safe and sound. White (2001), concluded that the following

aspects of the home environment had a greater impact than socio-economic status (SES) on students school performance; parents attitude, guidance and expectation for their children's education; participating in cultural learning-related activities; and overall stability in the home.

Gutierrez (2004), reveals that a competitive study environment in the academically above average schools may even enhance better social relationship among the students and more involvement in their studies. Defines (2005) referred to this type of indirect association as "genetic mediations" of all the environment. Parents willing to spend extra money to place their child in a private school may be more supportive and have higher academic expectations than parents with children in public schools. Coll (2001), argued that the poor academic performance of children is caused by their families' lack of experience, services or financial resources to purchase educational materials.

According to Franger (2008); and Singh (2002), technology is at the centre of the modern educational process, especially for mathematical and analytical skills. Computers in classrooms are very important tools such as; the internet allow the smooth exchange of information between students and machine buy must be positioned and used in environment that do cause distraction increasingly students can learn through virtual classroom when no teacher is available. Comfortable surrounding and this form a learning, and children in this type of environment tends to do better in mathematics and other subjects.

## **2.7. Government/Political Factors**

One of the objective of the National Policy on Education is to produce people who are self-reliant, technologically and scientifically. How can this be achieved without emphasis in mathematics which it has fallen short of? In other words, there is poor designed programme, poor planning and hence, general poor performance in mathematics. In view

of this, Idiaghe (2004), showed that numbers of primary schools in Nigeria increased from 48, 552 with total enrolment 17, 907,008 and 1989 to 59,154 with total enrolment of 25,705,969 in 2003. On the relationship between educational resources and students' academic performance, it was concluded that teachers qualification and hence availability or non-availability of facilities in schools affect the academic performance of students.

A research submission by FGN/UNESCO/UNDP (2003), noted that over the last two decades, the management of primary education had been experiencing some problems as a result of policy gaps in Nigeria. Schools were not well-maintained and facilities were not adequately provided arising from the fact that management of primary education was used as political football between state government, local government and federal government. Durosaro (2005), opined that effective management of primary school was identified unresolved due to lack of accurate and timely data and this had directly affected the issue of policy formulation.

Oghwubu (1999) pointed that management problems in primary schools such as inadequate preparation of teachers' lack of instructional supervision, change of curriculum, geographic location of schools and the type of supervising climate in schools feat are traceable to decline in the performance experience in schools. Okoh (1998), argued that many of the problem is identified stem from the inadequacy of funding for primary education and that resources are still not being made available to build and maintain the necessary infrastructure and provide essential educational materials. Report by World Bank (2003), on issues relating to management of primary schools facilities, it reflected the importance of adopting the basic elements of management such as planning, organizing, directing, staffing, coordinating, budgeting for and reported in primary educational system.

Ajayi and Faremi (2006), reported that most parents and guardian in Nigeria currently prefer sending their children and wards to private primary schools where fees are paid as

against the public primary schools that are tuition free. Ironically, the indigent parents who are supposed to take the advantage of the free education obtainable in public primary schools also join the vogue of sending their children to private primary schools. Adekola (2004), gave two speculative reasons why private primary schools have better oral grammatical expression, that those in the public primary school, and second, most private primary schools have to convey their pupils to and fro schools. Ladosu (2006) noted that many parents regard it as a prestige, sending their children to fees paying institution since no parent would like to be tagged poor.

According to Ajayi and Faremi (2006), many parents and guardians withdraw their children and wards from public schools to enrol them in private schools due to incessant strikes by teachers in public schools, the factor which consider as inimical to the educational development of the pupils. Adamaechi and Ramanie (2000) proper planning has been found to be a root of the success of every good educational policy programme. Without proper planning, the best programme is bound to fail, especially in mathematics which needs scientific and manipulative knowledge.

The punch magazine (2008) also stated that the unity of schools debate exposed the un-seriousness in planning the primary education. Over the years, the government have not been properly funded the primary schools by providing all the necessary equipment and facilities needed in our primary schools which has resulted to students performing poorly in mathematics. The punch magazine (2008) also stated that the educational budget is a far cry for the limited nations educational scientific and cultural organization (UNESCO) 20% recommended indicating that the primary programme is yet to experience it full peak in spite of efforts put in by the students.

According to Sulaiman (2008), said that government politicized the recruitment of teachers which brought about the disqualified ones that we have in our primary schools,

that is why you find out that the pupils who attend private primary schools are able to acquire qualitative education because there, everybody cares and there is strict supervision. Nwagwu (2000) saw poor planning by the government as one of the problems responsible for the unsuccessful implementation of the UBD programme in Nigeria. Joshua (2003) opined that why pupils perform poorly in our primary schools especially in mathematics is because government have not been motivating the teachers who teach these students.

## **2.8. Parents Socio-economic status (SES and Pupils Performance)**

The educational, financial, economic and societal status of a parent has an important role to play in educating a child. A child brought up from an educationally or financially unsound home may not likely do well because no reading materials, no one gives and provide advice when needed etc. and an illiterate parent cannot be involved in the education of their children; he cannot read, write and even spell correctly. How do you expect such a parent to solve assignment for their children? But a middle-class family can provide necessary school fees needed, get good books for their children and even send them to better schools. They can contribute in doing their home works, assignments and can get involved in their children education which will bring a change in their performance either mathematical or otherwise.

According to Casanova, Garcia-linares, Torre and Carpio (2005), environmental influence such as hunger homelessness, sickness, physical and mental disabilities, violence, teen parenthood, family stress and educational failure combined with family influence that contributes to student academic success. If a student has not eaten in days, and has clothes that don't fit, how can he/she be expected to maintain focus in a classroom? Children coming from poverty are not provided the same tools as the wealthy; they are entering schools behind those not living in similar conditions. Research suggests that problems start with the

parents and their lack of education and understanding of the needs of children (Li-Grinning, 2007).

According to Harris (2007), low poverty schools are 22 times more likely to reach consistently high academic achievement compared with high poverty schools. There are many factors that are attributed to poor success rate in low income schools. Many schools remain segregated accordingly to socio-economic status (SES). Desegregated schools have higher achievement for higher poverty students. Machtiger (2007), schools with high population of low income students often provide a curriculum experience. High poverty schools have far fewer qualified teachers and lose the ones they do not have at a greater rate than low poverty schools. A student in a high poverty school can have up to a 50% greater chance of being taught by an inexperienced teacher than a student in a low poverty school.

Christle and Jovilette (2007) opined that socio-economic status is one of the main factors that contribute to drop-out rates. She maintained that there is a strong relationship between socio-economic status and the dropout rate. With students from low income families being 2.4 times more likely to drop out of high school than middle-income students. Students of low socio-economic status frequently attend schools with a high dropout rate which increases the chances that they will dropout as well.

Van Dorn, Bowen, and Blau (2006) also suggest that it is to just those who live in urban areas from low income household that are risk to dropout, but also those who live in rural area from low socio-economic status. "Prior academic achievement". Family patterns have an effect on dropout rate. This that if a student struggles and earn poor grades early in their academic career they will have more of a chance of dropping out in high school. Furthermore, if a student has a sibling who has dropped out of high school, they are at an increased risk of dropping out. To them, research on high school has shown school size to



impact educational outcomes: smaller schools often between 600 and 900 students provide a better context for learning.

Smith (2006), low socio-economic status not only affects dropout rates but it affects parental involvement in a student's involvement in a child's education, there is more of likelihood that the student will not succeed. When parents are not involved or interested in his/her children education, there is a greater chance that the child will not be interested in his or her own education. This directly affects whether or not the students will finish school. It is not uncommon to see little parental involvement in the education of children from low income households. This in turn leads to an increase in behavioural problems.

Domina (2005) parental involvement does not independently improve behavioural problems. Interactions analysis suggests that the involvement of parent with low socio-economic status may be more effective than that of parents with high socio-economic status. He further suggests parental involvement as not only helping with homework but also becoming involved and active in other aspect of a child's education. He further state that Academic achievement requires both student and parent involvement. Ornstein (2006) opined that students who live in property-rich areas will have far more resources in their school than those who live in poverty poor areas.

In a study by Andre, Aubry, Battista and Passero (2012), on socio-economic status and education observed that affluent, suburban students is particularly vulnerable to anxiety and depression related to academic pressure and isolation from parents. In addition, these findings further demonstrates that the psychological adjustment problems of this group of students manifest themselves in higher incidence of substance abuse and academic dishonesty as compared with the national norm.

Similarly, Taylor (2002) studied the cheating behaviour of elite high school students through semi-structured interview responses from students considered to be in the top 10%

of their class. Students reported pressure from competition for class rank as the most common reason for cheating. The school environment perpetuates this competitive environment by placing emphasis on individual ability and class rank. Students feel that this puts students against one another and places total responsibility for achievement on the student. And that majority of students also experienced parental pressure to succeed. Some reported parent withholding affection when students' grades did not meet parental expectations. Other students reported parental pressures to obtain scholarship in order to afford the tuition of a prestigious institution.

## **2.9. Summary of the literature review**

In spite of the numerous causes of poor academic performance of primary school mathematics, it is still never too late to curb the situation. Effort must therefore be made to mathematics. Pupils should stop having that fear or anxiety that mathematics is difficult, they should develop the ability and interest to learn the subject just like every other subject. Pupils should read their books regularly because mathematics required continuous reading and studying.

Parents should make sure that pupils school fees are paid on time to save them the opportunity of being home. They should make sure that pupils are strictly supervised and monitored at home, making sure that all assignments are properly done and by noting the kind of friends they keep. Parents should also be assessing their children or wards based on their day-to-day lessons they receive in school in order to trigger seriousness on them. Parents should provide a conducive study environment, parental environmental environment and friendly environment so that the pupil can study, relax and feel at home.

To the teacher, efforts should be made to learn mathematics. First, the use of instructional materials should be practiced as this will help solidify mathematics.

Demonstration and individualized methods is the appropriate methods to be used in teaching the subject. They should progress from simple to complex, from lower order concepts to higher order concepts. The mathematics teachers should be knowledgeable in mathematics so that he/she can plan an effective or engaging lesson. Instructional and classroom management should be monitored and adhere by the teacher.

The head teacher as the head in any school setting should be devoted in his/her duties in order to effect his administration. Teachers' note of lesson should be properly checked before normal lesson. The head teacher should be democratic in his/her administration and stop being a *laissez-faire* kind of person. It is the head teacher's duty to designate any non-quality teacher and keep the government informed on the provision of adequate teachers where they are lapses. He/she should make the school environment conducive for learning. All structures in the school should be properly checked so that if any building needs renovating, he/she can notify government about that.

To the government, the under listed points should be noted before designing a mathematics programme.

1. The employment of adequate and qualified teachers
2. Motivation of teachers: this should be done because when a teacher is not motivated he/she might not render his/her services as supposed. Teachers should be motivated through payment of their salaries and wages on time, by giving them promotion consistently and adequately.
3. Building new schools, and removing old ones for pupils to stay and study effectively.
4. Government should make sure that they plan and supervised the curriculum, lesson plan of teachers very well so as to sort and resign those unqualified and unserious ones.
5. Visual and audio-visual aids which can help to improve mathematics performance in primary schools.

6. Government should send inspectors or supervisors for routine checks on weekly basis so that teachers and head teachers should be serious in their duties and perform their various roles accorded them.
7. Finally, seminars, workshops etc. should be organized for teachers and head teachers so as to improve their standards, and keep them updated into new changes or development.

## **CHAPTER THREE**

### **RESEARCH METHODS**

#### **3.0 Introduction**

This chapter presents the design and methodology employed. The purpose of conducting this research, the aim is to outline the procedures that were used to answer research questions. This chapter was presented under the following sub-division.

1. Research design
2. Area of the study
3. Population
4. Sample and sampling techniques
5. Instrumentation of data collection
6. Validation of the instrument
7. Methods of data collection
8. Methods of analysis

#### **3.1 Research Design**

The study employed a descriptive survey and quasi-experimental research designs. Descriptive survey design was considered appropriate because the study sought to describe with empirical data, the state of affairs of all the observed phenomena; while the quasi-experimental design was used because the study also sought to investigate whether there is a difference in academic performance of private and public primary school pupils in mathematics.

#### **3.2 Area of Study**

This research was carried out in Akamkpa Local Government Area of Cross River State. Akamkpa Local Government Area is on the central senatorial district of Cross River

State and was created in 1976. It has an area of 5,0003km<sup>2</sup> and a population of 151, 125 at the 2006 census. It is bounded by Odukpani and Akpabuyo Local Government Area of Cross River State to the West, Biase and Yakurr Local Government Area to the South, Ikom and Etung Local Government Area of Cross River State to the North-West and the Republic of Cameroun to the West.

There are ten (10) wards in the Local Government Area viz: Akamkpa urban ward; Uyangha ward; Ikpi ward; Awi ward; Mbarakom ward; Ojuk south ward; Ojuk north ward; Oban ward; Eku ward; and Iko ward. There are two main ethnic groups in the area which include: Ejagham and Dusauga Iyong Iyong people who speak Ejagham and Iyong Iyong language. English and Efik languages are also widely used for commercial and other social interactions, while Christianity is the predominant religion of the area. The Local Government Area comprises of 260 villages, grouped under 30 clans for political and administrative convenience.

### **3.3 Population**

The study involves all the teachers and pupils in both public and private primary schools in Akamkpa Local Government Area of Cross River State. There are 23 public and 36 private primary schools, resulting in a total of 59 primary schools in the Area. However, for the purpose of this investigation and convenience, 5 public and 4 private making a total of 9 (nine) primary schools selected for the study. The population of teachers in the area is 767 (Seven hundred and sixty seven); while the population of pupils are 4,332 (four thousand three hundred and thirty-two).

### **3.4 Sample and Sampling Technique**

A random sampling procedure was adopted to select 270 pupils and 45 teachers for the study. The sample of pupils and teachers was selected to represent both type of schools,

in the area of study. For the purpose of convenience, the schools were designated with A, B, C, D, E to represent the five public primary schools while the four private schools were denoted with F, G, H, I.

**TABLE ONE**

**Sample distribution of pupils and teachers used for the study (n = 315)**

<b>Schools</b>	<b>Pupils' sample</b>	<b>Teachers' sample</b>	<b>Total</b>
A	30	5	35
B	30	5	35
C	30	5	35
D	30	5	35
E	30	5	35
F	30	5	35
G	30	5	35
H	30	5	35
I	30	5	35
-	<b>270</b>	<b>45</b>	<b>315</b>

### **3.5 Instrument(s) for Data Collection**

The instruments used for data collection was a twenty-five item questionnaire which was constructed by the researcher; and a 10-item multiple choice mathematics achievement test (MAT) also designed by the researcher, were used to obtain data for study. The questionnaire consist of two sections: Section A and Section B. Section A was designed to collect pupils' personal information, while section B was designed with items in a manner that poses convenience in ticking the items against each question thus, the section consist of the rating. The mathematics achievement test was used to test both the experimental and control groups.

### **3.6 Validation of Instrument**

The instruments used or constructed was given face validity and approval for administration by my project supervisor.

### **3.7 Method of Data Collection**

The Nine (9) sampled primary schools used for the study were visited on different occasions, based on the permission of the head teachers. The questionnaire were produced to exceed the 317 respondents used for the study in order to avoid the problem of shortages. And the mathematics achievement test (MAT) questions were produced to cover the 40 pupils used in the test. The questionnaires were administered in the various school to pupils and teachers. Two primary schools were randomly selected from both private and public primary schools out of the nine (9) sampled primary schools. A mathematics achievement test was conducted on ten students in each school. All the completed questionnaires and answer sheets of the test used were appropriately returned and submitted to the researcher for analysis.

### **3.8 Method of Data Analysis**

The data collected were analysed to provide answers to the research questions posed to guide the study. The collected data were coded and scored; while simple percentage and arithmetic mean were used as descriptive statistical techniques to analyse the data collected.



## CHAPTER FOUR

### RESULTS

This chapter has to do with the presentation interpretation and discussion of research results and findings.

#### 4.1. Presentation of results

The results of this study was presented under the following research questions. The interpretation of results follows the table where such results were presented.

##### Research Question One:

To what extent do the use of instructional materials affect pupils' mathematics performance? Table two present the summary of responses to questionnaire items 1, 2, 17, 19 and 25 which provides an answer to the research question one.

TABLE TWO

#### Summary and percentage of responses of the questionnaire items related to research question one (n = 315).

ITEMS(S)	SA	%	A	%	DA	%	SD	%	N.O	%
You have a well-equipped library with mathematics materials	88	32.6	24	8.9	19	7.0	131	48.5	8	3.0
You enter the library once a week.	65	24.0	56	20.8	37	13.8	91	33.8	21	7.7
The school well equipped with teaching materials?	16	35.5	4	8.9	7	15.5	17	37.8	1	23
You improvise instructional material in the absent of standard materials	5	11.1	3	6.7	15	33.3	20	44.4	2	4.5
My school have a good library	8	17.7	8	17.7	14	31.2	15	33.4	0	0
<b>TOTAL</b>	<b>182</b>	<b>27</b>	<b>95</b>	<b>14</b>	<b>92</b>	<b>13.7</b>	<b>274</b>	<b>40.5</b>	<b>32</b>	<b>4.8</b>

From table two, 27 percent (%) of the respondents already agreed, 14 percent of the respondent agreed, 13.7 percent of respondents disagreed; 40.5 percent of respondents strongly disagreed; while 4.8 percent of the respondent had no opinion. All with regards to the use of instructional materials and other aids.

### Research Question Two:

To what extent does parent socio-economic status affects academic performance of pupils in mathematics? The response to the questionnaire items 3, 4, 5, 6, 7, 8, 9, and 21 relating to the research question provided relevant data and these are summarized in table three.

TABLE THREE

#### Summary and percentage of responses of the questionnaire items related to research question one (n = 315).

ITEM(S)	SA	%	A	%	DA	%	SD	%	N.O	%
Your parents pay school fees on time	82	30.4	28	10.4	40	14.8	98	36.3	22	8.1
Your parents return from work lately	99	36.6	20	7.4	32	11.8	96	35.6	23	8.6
Your parents have been assisting you in home work at home	32	11.9	15	5.6	97	35.9	108	40	18	6.6
Your parents buy mathematics study materials for you	34	12.6	28	10.4	56	20.8	132	48.9	20	7.4
Your parents earn salaries.	118	43.8	56	20.8	18	6.7	76	28.1	2	0.7
Your parents attend PTA meetings	39	14.5	50	18.5	42	15.5	131	48.5	8	3
your parents are government workers	60	22.3	85	31.5	38	12	55	20.4	32	11.8
Parents report cases of poor study habits of pupils at home to you	0	0	2	4.4	20	44.4	23	51.2	0	0
<b>TOTAL</b>	<b>4.6</b>	<b>24</b>	<b>284</b>	<b>14.6</b>	<b>343</b>	<b>17.7</b>	<b>719</b>	<b>37.1</b>	<b>125</b>	<b>6.6</b>

The results presented in table three indicates that 24% of the respondents strongly agreed that parents socio-economic status has effect on pupils performance, 14.6% of the respondent agreed, 17.7% of the respondents disagreed, 37.1% of the respondent strongly disagreed while 6.6% of the respondent had no option with respect to parent socio-economic status and pupils performance in mathematics.

### Research Question Three

What is the difference in the performance of private and public primary schools pupils in mathematics? Table four present the scores of pupils from two private school (pr 1 and pr 2) and two public school (pu 1 and pu 2) respectively in a mathematics achievement test.

TABLE FOUR

**Summary and mean of the performance of pupils from private and public primary schools in a mathematics achievement test (n = 40)**

S/N	Pr. 1	Pu. 1	Pr. 2	Pu. 2	Total
1.	10	7	10	10	37
2.	9	9	8	7	33
3.	8	8	9	1	26
4.	10	6	10	0	26
5.	8	8	9	6	31
6.	8	7	8	3	26
7.	9	8	8	6	31
8.	9	7	10	9	35
9.	10	6	9	4	39
10.	8	0	10	6	24
<b>MEAN (X)</b>	<b>8</b>	<b>6.6</b>	<b>9.1</b>	<b>5.1</b>	

The results presented in table four showed that private school one (pr1) had a mean of 8, public school one (pu1) had a mean of 6.6, private school two (pr2) a mean of 9.1 while public school two (pu2) has a mean of 5.1 in the mathematics achievement test.

### Research Question Four

In what ways do teachers contribute to pupils' poor performance in mathematics? The responses to the questionnaire items 10, 11, 12, 13, 14, 19, 20, 22, 23, 18 and 24 relating to the research question provided relevant data which are summarized in table five below.

TABLE FIVE

**Summary and percentage of responses of the questionnaire items related to research question one (n = 315).**

ITEM(S)	SA	%	A	%	DA	%	SD	%	N.O	%
You like your mathematics teacher	82	30.4	40	14.8	42	15.5	88	32.5	18	6.6
Your mathematics teachers gives an assignment at the end of every lesson.	3	1.1	13	4.8	101	37.4	151	55.9	2	0.7
Your mathematics teacher always come to class on time.	109	40.3	62	22.9	38	14	60	22.2	1	0.3
I understand mathematics whenever my teacher is teaching.	12	11.8	22	8.1	44	16.2	152	56.2	20	7.4
I have up to 3 mathematics teachers in my school.	118	43.7	24	8.8	28	10.3	99	36.6	1	0.3
You improvise instructional materials in the absent of standard materials.	3	6.6	2	4.4	10	22.2	30	66.6	0	0
You set exams questions based on the areas covered.	19	42.2	15	33.3	3	6.6	7	15.5	1	2.2
You flog pupils for answering a question wrongly in class.	6	13.5	3	6.6	16	35.5	20	44.4	0	0
You teach in more than one school.	1	2.2	3	6.6	28	62.2	13	2.8	0	0
You are not always punctual to school.	29	64.4	9	20	3	6.6	4	8.8	0	0
The number of mathematics teachers is proportionate to the number of pupils	8	17.7	15	33.3	18	40	4	8.8	0	0
Total	4.64	24	284	14.6	343	17.7	719	37.1	125	6.6

Result in Table five indicates that 25.3% of respondents strongly agreed, 12.8% agreed, 20.4% disagreed, 38.7% strongly disagreed while 2.8% had no option with respect to ways in which teachers contribute to pupils poor performance in mathematics.

#### 4.2. Discussions of Findings

The major findings observed in this chapter are discussed as follows:

1. About 40.5% of the respondents showed that instructional materials were adequately used and which in turn bring about their poor performance in mathematics. This findings support the research results conducted by Joubert and Andrews (2010) who observed that "improper method of teaching mathematics, lack of mathematics laboratory, insufficient instructional aids and poor use of instructional materials causes poor performance in mathematics". So, the cause of poor performance in mathematics can be appraised to improper use of instructional materials.

2. Parents' socio-economic status was viewed by 37.1% of the respondents as a strong factor that caused pupils poor performance in mathematics. This finding have supported the research study conducted by Jeynes (2007) who found that "if there is little parental involvement in a child's education, there is more of a likelihood that the student will not succeed". Then the cause of pupils' poor performance in mathematics therefore appears to arise partly from the socio-economic status.

3. From the mathematics achievement test, the mean 8, and 9.1 coming from two private schools, and the mean 6.6 and 5.1 coming from the two public schools showed that private school pupils performed better than their public schools school counterpart which support the research of Meremikwu and Obinna (2010) in their study of "instructional aids, school variables and pupils mathematics achievement in primary schools". Found that "pupils mathematics achievement was significantly dependent on the treatment, school type and school location but not on their gender. Also, all the interactions of the treatments, gender, school type, and school location were statistically significant in experimental group in private schools achieved significantly higher than their counterparts in the public schools". So private schools pupils perform better than those pupils in public primary school.

4. The teacher influence was views by 38.7% of the respondent as a very strong factor responsible for pupils' poor performance in mathematics. This finding of Rosenholtz (1989), quoted in Daling-Hammond (2000) and Hawkins, Stancavage and Dossey (1998) who found "teaching experience to be related to students achievement but that the relationship may not be linear, student of teachers who had fewer of mathematics achievement but there were no difference in mathematics achievement among students whose teachers had more than five years of fit of experience level of after years". Then the causes of students' poor performance in mathematics, therefore appear to arise partly from the teachers' incompetence in the field.

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## CHAPTER FIVE

### SUMMARY AN CONCLUSION

This chapter presents the summary of what was involved in this study, conclusions reached and recommendations made.

#### 5.1. Summary

The purpose of this study was to ascertain the causes of pupils' poor performance in primary school mathematics. Specifically, the study was designed to answer the following research questions.

- i. To what extent do the use of instructional materials affect pupils' mathematics performance?
- ii. To what extent does parent socio-economic status affects academic performance of pupils in mathematics?
- iii. What is the difference in the performance of private and public primary schools pupils in mathematics?
- iv. In what ways do teachers contribute to pupils' poor performance in mathematics?

The total population involved in this study was 315 subjects which consisted of 45 teachers and 270 pupils in the selected primary schools in the area under study. A 25 questionnaire item based on four research questions was developed used to collect the data for the study.

#### 5.2. General Conclusion

Within the limitation of this study and the findings presented, the following conclusions are drawn.

1. The use of instructional materials adequately led to pupils' poor performance in mathematics.

2. Parents' socio-economic status contributed to the pupils' performance in mathematics.
3. Pupils in private primary school perform better than their colleagues in public schools in mathematics.
4. Teachers contribute to the poor performance of pupils in mathematics.

### **5.3 Implication of the Study**

The following are the implications of this study:

1. It will be useful for the government to improve the standards of public primary schools counterparts.
2. It will be useful for teachers to know their weakness as well as their strength in order for subsequent improvement.
3. It will be useful for parents to know their weakness as well as their strengths in order to effectively contribute to their children's education.
4. It will provide a basis for government to train teachers and adequately post them appropriately to areas where needed.
5. It will help teachers to develop their instructional material usage and improvisation techniques.

### **5.4 Recommendation**

On the basis of the findings of this study, and the conclusions made, the following recommendations are presented.

1. Teachers should be encouraged to use instructional materials in every lesson. They should also be trained on how to use these instructional materials. This can be done through seminars, workshops etc.

2. Parents should be advised to take part in their children's education by paying their fees, helping them do assignments, attend PTA meetings etc. Parents can be advised through counselling, teachers etc.
3. Government should improve the public primary schools by adequate funding, providing teaching aids and learning facilities, provision of trained teachers, proper planning and implementation of the primary education programme, proper supervision, monitoring and the evaluation of the curriculum etc.
4. Teachers who teach mathematics in our primary schools, should be given necessary incentives to motivate them. They should be trained and qualified before embarking on the teaching activity. Teachers can be motivated through appropriate payment of their salaries and other wages, by giving them consistent promotion etc.

### **5.5 Limitation of the Study**

This study was conducted in Akampa Local Government Area of Cross River State. This study was limited to nine primary schools due to time and financial problems that couldn't allow me to conduct this research in the whole area.

### **5.6 Suggestions for further Study**

1. Strategies for the improvement of teaching and learning of mathematics in secondary schools.
2. Performance of students in mathematics in a single sex school and in mixed sex school.
3. Gender inequality and mathematics achievement in public schools.
4. Teachers' poor teaching behaviour and ethics in the teaching and learning of mathematics in private and public schools.
5. Pupils from broken homes and their academic performance in mathematics.





## APPENDIX I

### QUESTIONNAIRE

The purpose of this questionnaire is to obtain information with respect to some causes of poor performance of pupils in primary school mathematics.

I would be very grateful if you could co-operate by giving answers to the questions below, for it will help to reach a valid conclusion. The information obtained will be used purely for academic exercise.

#### **Instructions**

Please tick (√) for yes and (x) for no, where necessary in the space provided against each question.

#### **Section A: (PERSONAL DATA)**

- a. Name of school: \_\_\_\_\_
- b. Sex: Male [  ] Female [  ]
- c. Age: Below 15 year [  ], 15-30 years [  ] 31 years and above [  ]
- d. Qualification: TC II [  ], ACE [  ], NCE [  ], B Ed. [  ], OND [  ] HND [  ], BSc [  ], PGD [  ], BA [  ], MSC [  ], MED [  ]

#### **Section B:**

Please tick (√) in the appropriate column against each statement

#### **Rating**

SA = Strongly Agree

AG = Agree

DA = Disagree

SD = Strongly Disagree

No op = No opinion.

**FOR PUPILS ONLY**

<b>S/N</b>	<b>QUESTION</b>	<b>SA</b>	<b>AG</b>	<b>DA</b>	<b>SD</b>	<b>NO. OP</b>
1.	You have a well-equipped library with mathematics materials.					
2.	You use the library one a week					
3.	Your parents pay your school fees on time.					
4.	Your parents have been assisting you in home work at home.					
5.	Your parents often return from work late.					
6.	Your parents buy mathematics study materials for you					
7.	Your parents earn salaries.					
8.	Your parents attend PTA meetings.					
9.	Your parents are government workers.					
10.	Do you like your mathematics teachers?					
11.	Do your mathematics teachers give assignment at the end of every lesson?					
12.	Do you understand mathematics whenever your teacher is teaching?					
13.	Do you have up to 3 mathematics teachers in your school?					

**FOR TEACHERS ONLY**

<b>S/N</b>	<b>QUESTION</b>	<b>SA</b>	<b>AG</b>	<b>DA</b>	<b>SD</b>	<b>NO OP</b>
14.	Do you assess pupils at the end of every lesson?					
15.	Do you make use of the current syllabus/curriculum?					
16.	Is the school well equipped with teaching materials?					
17.	Is the number of mathematics teachers proportionate to the number of pupils?					
18.	Do you improvise instructional materials in the absent of standard materials?					
19.	Do you set exams questions based on the area covered?					
20.	Do parents report cases of poor study habit of pupil at home to you?					
21.	Do you flog pupils for answering a question wrongly in class?					
22.	Do you teach in more than one school?					
23.	You are not always punctual to school					
24.	Does the school have a good library?					

**APPENDIX II****MATHEMATICS ACHIEVEMENT TEST (MAT)**

**INSTRUCTION(S):** please tick (✓) in the field you require as being fit for the appropriate answer.

**PERSONAL DATA**

Name of school: \_\_\_\_\_

Age: \_\_\_\_\_

Sex: Male [ ] Female [ ]

Class: \_\_\_\_\_

1.  $1000 + 50 = \dots\dots\dots$ (a)10050 (b) 100050 (c) 1050 (d) none of the above
2. Identify a proper fraction below (a)  $\frac{8}{10}$  (b)  $\frac{100}{10}$  (c) 10.8 (d) none of the above.
3. Add  $\frac{3}{12} + \frac{8}{2}$  (a)  $\frac{11}{12}$  (b)  $\frac{11}{14}$  (c)  $\frac{11}{13}$  (d)  $\frac{12}{2}$
4. Counting in tens, fill the missing numbers below 60,\_\_\_\_,90,\_\_\_\_(a)70, 90, 100 (b) 60, 80, 90 (c) 70, 80, 90
5. Given the 7324, find the place value of 3 (a) Thousand (b) Units (c) Hundreds (d) Tens
6. The roman numeral L means what (a) 100 (b) 5 (c) 50 (d) 88
7.  $X + X + I + V$  represent what number (a) 24 (b) 25 (c) 26 (d) 30
8.  $88 - 33$  gives\_\_\_\_\_ (a) 58 (b) 55 (c) 38 (d) 8833
9.  $10 \times 20 = \dots\dots\dots$  (a) 2010 (b) 1020 (c) 200 (d) 120
10.  $2 + 8 + 10 + 9 + 2 = \dots\dots\dots$ (a) 30 (b) 31 (c) 32 (d) 50

**APPENDIX III****Sample of the Study**

1. St Theresa primary school, Awi
2. United academic nursery and primary school, Akamkpa
3. Army-Day Primary school, Akamkpa
4. Community primary school, Ayaebam
5. Treasure Child Nursery and primary school, Awi
6. St Theresa primary school, Mbarakom
7. Wisdom nursery and primary school, Akamkpa
8. Staff Demonstration primary school, Akamkpa
9. St John primary school, Akamkpa