FACTORS INFLUENCING THE TEACHING AND LEARNING OF MATHEMATICS IN SECONDARY SCHOOL IN OREDO LOCAL GOVERNMENT AREA OF EDO STATE.

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CERTIFICATION

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DEDICATION

This project work is dedicated to the Almighty God for his grace and mercies and to my family for their support and love throughout my period of study.

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ABSTRACT

This study examined the factors influencing teaching and learning of mathematics in senior secondary schools in Oredo Local Government Area, Edo State, Nigeria. The objectives of the study were to determine the extent to which :the perception of teachers, the methodology of teachers ,shortage of instructional material, and shortage of qualified teachers influenced the teaching and learning of Mathematics secondary school.

The study adopted the descriptive survey research design. The population of study comprised of all the 565 (five hundred and sixty five) Mathematics teachers in the sixteen (16) public secondary school in Oredo Local Government Area The study adopted the simple random sampling technique in selecting 28 (twenty eight) Mathematics teachers from five randomly selected schools. A structured questionnaire titled: Factors influencing the Teaching and Learning of Mathematics Questionnaire (MAFTQ) was used for data collection. To analyze the data collected, the research questions were answered using descriptive statistics such as simple mean and standard deviation. The results indicated that the perception of the teachers influences the teaching and learning of Mathematics, teachers' Methodology influences the teaching and learn of Mathematics, Inadequacy Instructional Facilities affects the teaching and learning of Mathematics, Inadequacy of qualified teachers influences the teaching and learning of Mathematics in secondary schools. Based on the results of this study, it was recommended that: There should be adoption of learner centred methods by teachers to accelerate the stimulation and retention of learners interest in the teaching and learning process thereby enhancing students comprehension of

concept taught in class, There is need for government and other stakeholders in the education industry to regularly and periodically organize in-service seminars for teachers to be adequately equipped with skills to impart knowledge to students to assimilate Mathematics topics, Government should increase her annual budgetary allocation to secondary school education to facilitate the procurement of instructional resources in the teaching of Mathematics in secondary schools.

There should be regular and periodic training of Mathematics teachers to adequately equip them and to keep abreast with modern instructional strategies in the teaching of the subject as it would facilitate an enhancement in the quality of the instructional delivery inherent in the subject.

CHAPTER ONE

INTRODUCTION

Background of study

The current emphasis of government on science and technology for effecting national development is greatly reflected in the National Policy of Education (FRN, 2013), which states that not less than 60%of places shall be allocated to science-oriented courses in the conventional universities and not less than 80% will be for the University of Technology. The policy makes candidates with relevant strengths in sciences especially, Mathematics to be favored in the selection process. It is also worthwhile to note that admission into universities for a career in Engineering, medicine, pharmacy, agriculture and physical sciences require a credit in Mathematics at Senior Secondary School Certificate Examination (Unilorin Acedemic Program 2003-2011). Mathematics has also regarded as the bedrock for sustaining growth and technological development, because theory behind technology and foundation of some theoretical and applied technology in science is promised on mathematics (Okoro, 2013). Mathematics, a basic science is

conceived as a subject where students learn about nature through experimental skill of hypothesizing, testing and experimenting and also the medium through which (i) acquire the ability to apply knowledge and reproduce verbal or numerical formulae needed for solving problems relating to daily life activities and (ii) get prepared for higher education in science and technology. Thus, the importance of mathematics to scientific knowledge and technological development of a nation cannot be overemphasized.

To benefit from the development of a nation, it is necessary that we intensify our efforts to lay the foundation of technological advancement through better teachers that provides an environment that allows students to reach their potential, because effective instruction provided by teachers help students develop at their optimal trajectory (Tajlor, 2010). Achieving quality mathematics education depends upon availability and effectiveness of mathematics teachers' method (Ekuezwla, 2009, Taykor, Rachring, Hensler, Connor Schatschneider, 2010). To buttress this, the Federal Republic of Nigeria in its National Policy on Education (FRN, 2004) stated that no education system can rise above the quality of its teachers and Davies (2012)

stressed that quality curriculum needs a qualified workforce to achieve quality outcomes.

Abdulkareem (2017) observed that the perceived difficulties of topics in mathematics could be traceable to the inadequacy of effective teachers. It is for this reason that he asserted that for effective learning to occur teachers should first identify students' prior ideas, make students aware of them and in the light of this ideas, help students construct their own understanding. Also, provide opportunities for students to apply their newly acquired knowledge to different situations. However, in Nigeria, it has been observed that we lack the requisites number of qualified mathematics personnel for our educational system (Ogunniyi, 2007) but also the observed effectiveness of those in services is suspect.

Fifty years, after the establishment of mathematics education, the perceived absence of trained teachers and an attendant teaching quality that is below average still plague the subject. Oraifo (2012) observe that this could be the cause of perceived challenge in the teaching and learning of mathematics education. The observed scarcity of qualified mathematics

teachers may impede the implementation of the national policy on education because, the content of secondary school mathematics syllabus has been raised to include some topics that are usually encountered at the post-secondary school level. The practice in our schools is that teachers with less educational qualifications seems to lack pedagogy participate more in mathematics teaching. Therefore, they often seem to fail to provide students with teaching that result in knowledge application, the essence of technology some teachers, due to professional incompetence are allowed to teach topics without making clear the broader fundamental structure of a field of knowledge, thereby making application of knowledge acquired difficult. According to Egbugara (2009), mathematics derives its reputation as a subject primarily from its dominant problem solving nature. Olagunju (2012) observed that the perceived challenge of teaching and learning mathematics could be traceable to the problem solving nature. Olagunju (2012) alleged that problem solving is a process by which learners discovers a combination of previously learnt rules that can be used to achieve a solution in a problem situation. It is a skill acquire by watching expert exercising the skill, and the learner engaging in repented practice (Roger, 2016). Experts have a

tendency of firstly analyzing the problems qualitatively by depending on the fundamental mathematics concept before passing on to solve the problems by means of mathematical equations. Whereas, novice mostly seem to start to solve the problems by means of mathematical equations, substitute the given variables and then investigate the other equations where they can substitute the other qualitative variable (Dhillon, 2008), Also, in solving problems in mathematics, the learner is expected to recall the previously acquired knowledge and apply it to solve the unfamiliar problem at hand. Problem solving bridges the gap between a problem and a solution through the use of knowledge and reasoning (Ahiakwo, 2001). Aluko (2014) observe that problem solving is a way of stimulating on intellectual's curiosity as it aids the transfer of learning. Problem solving plays a vital role in the teaching and learning of mathematics. This is because it aids application of knowledge acquired in physical lesson, consequently, the level of its strategic application determines the performance of the students.

The perception of a subject can be a drive towards realizing a nation's educational policy a huge gap in meeting our educational policy objectives. The perception of mathematics is that it is tedious, abstract, and

fundamentally irrelevant, also compounded with mathematical inhibition in its learning (Egbunara, 2009, Salman, 2002). Similarly, Ivow & Olodotun (2001) observed that, the reputation of mathematics as a difficult, abstract, sophisticated course loaded with calculations that are voluminous and complex contributed to the students' refusal to enroll in the subject. The consequences is a low enrolment as evident by the recent enrolment statistics (WASSCE report, 2007, 2008, 2009, 2010, 2011) and perceived difficulty in assimilating topics by students in mathematics.

Laboratory facilities are a potent factor to qualitative mathematics education. According to Balogun (2012) observed that no effective science education programme can exist without equipment for teaching. This is because learners' develop problem solving skills and scientific attitudes through this medium. In addition, the capacity of teachers and schools to advance the learning goals of laboratory experiences is observed to be affected by laboratory facilities. Direct observation and manipulation of mathematics experience require adequate laboratory facilities including, space for teacher demonstrations, student discussion and safe storage apparatus. Ogunseyo (2016) observed that when facilities are provided to

meet relative needs of a school system, students will not only have access to the reference materials mentioned by the teacher, but individual student will also learn at their own pace. Therefore, good performance will be enhanced. However, laboratory inadequacy seem to contribute perceived challenges of teaching and learning in mathematics (Raimi, 2001, Adeyegbe, 2005). It seem to be a tradition to see mathematics teachers moving from pillar to post every year, just to get a place to borrow the mathematics practical requirements for Senior Secondary School Certificate Examination. In most cases, some of these apparatus appears to be either faculty or do not meet the specification. The problems are observed to be detected during the conduct of the examination when it would be kolate, to act as a result, students would lack adequate exposure to practical work, and develop poor knowledge in practical work and faulty handling of apparatus which produce poor performance in mathematics.

Statement of the Problem

The sight of several students that fail mathematics in both internal and external examinations during school sessions in the recent past has become a source of worry to many. Interactions with some of these students in secondary schools in Oredo Local Government revealed that they had earlier been rusticated or suspended for the same act from school activities in previous sessions. Apart from these children that observably prefer cheating during exams, several others are alleged to indulge in other forms of malpractice like impersonation and sorting of teachers be short cut for better grades in examinations. A trip round some of the public secondary schools did not only confirm the students' alleged non-involvement in mathematics classes but also revealed cases of inadequacy of laboratory facilities, non-effective teachers, perceived poor of mathematics amongst these students. Since examination failure constitutes nuisance in every school system, the fear is predicated on that students' poor perception, reading habits, non-effective teachers, inadequate laboratory facilities in the teaching and learning of mathematics could be phenomena in the public secondary schools in Oredo Local Government.

The suspicion is predicated on the perennial problems of poor teaching methodology adopted by mathematics teachers, perceived shortage of qualified teachers, inadequate laboratory facilities and irregular attendance to class that characterize the teaching and learning of mathematics in secondary schools. It is not unlikely that students perceived poor perception of mathematics, inadequacy in laboratory facilities as well as the observed shortage of effective teachers that seem not to exercise professionalism and expertise in the discharge of their functions that participate in the instructional process in mathematics will get frustrated and express that frustrations by withdrawing from such schools, or by failing examinations that could lead to grade repetition or examination failure in Mathematics. It is therefore imperative to investigate the perceived challenges of teaching and learning mathematics in secondary schools in Oredo Local Government Area

Research Questions

The following research questions will guide the study.

1. To what extent does the perception of teachers constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.
2. To what extent does teachers' methodology constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?

3. To what extent does shortage of instructional facilities constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?

4. To what extent does shortage qualified teachers constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?

Purpose of the Study

The main purpose of the study is to access the perceived challenge of teaching and learning mathematics in secondary school in Oredo Local Government Area. Specially, the study intend to;

1. To assess the extent to which the perception of teachers constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.
2. To ascertain the extent to which the teachers' methodology constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.
3. To ascertain the extent to which the shortage of instructional facilities

   constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.

4. Find out the extent which the shortage of qualified teachers constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.

Significance of the Study

It is assumed that the findings of this study would be of immense benefit to the following stakeholders: Government, curriculum planner, teachers, students, to mention but a few.

- The findings of the study would stimulate the interest of government in providing facilities (emphasis on the laboratory facilities) to enhance the delivery of Mathematics education in secondary school of Nigeria. This can be done through increasing her annual budgetary allocation to the education sector which would invariably accelerate an improvement in the quality of mathematics education by facilitating the procurement of these facilities.

The findings of the study would also be beneficial to the curriculum planners in the sense that it would awaken them to incorporate introductory topics in problem solving strategies in Mathematics. 1 his can be done through the periodic and regular review of the mathematics curriculum to accelerate a sustenance of the interest of students in the instructional process.

The findings of the study would also help to eliminate the obscure and myopic perception of students on mathematics as a subject as well as elevate their sights on the need to actively participate in the instructional process. This can be done through collaboration between the science department in secondary schools and ministry of education to plan programs and interventions that not only the importance of science in national development, but also exposes students to the possibilities of meaningful and lucrative careers in mathematics.

The findings of the study would arouse the interest of teachers on the need to attend on symposia and seminars to acquaint themselves with modern strategies thereby enhancing the effectiveness of the instructional process. By embarking on such programs it would sharpen their teaching skills to not only impact knowledge to students but also to enhance their effectiveness in the instructional process.

Finally, it would serve as a source of reference materials to future researchers that want to embark in similar studies, thereby contributing to a body of knowledge.

Scope and Delimitation of the Study

This study will cover the examination of perceived challenges of teaching and learning mathematics in secondary schools in Oredo Local Government Area. This study will exhaustively explain variables as teachers' perception, teachers' qualification, laboratory facilities, teachers' methodology. However, the study will be delimited to senior secondary school teachers of teaching mathematics in the fifteen public secondary schools in Oredo Local Government Area.

Definition of Terms

The following terms were operationally defined in the study.

Perception: This refers to a person disposition or views towards a particular phenomenon.

Teachers Qualification: This refers to the level of teachers' knowledge of the subject matter in their area of specialization.

Laboratory Facilities: This refers to the apparatus that accelerate the effective teaching and learning ol mathematics.

Difficult Topics: this refers to the series of sub topics in the mathematics curriculum that is hard for students to assimilate.

Teaching: this refers to the systematic presentation of facts and information to students.

Learning: this refers to the relatively permanent change in the behavior of the students that occurs after such information and skill has been impacted by the teacher.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter deals with the review of related literature and relevant literature on this study. It shall be discussed under the following sub-headings:

- Concept of Mathematics
- Reasons Why Mathematics should be Studied
- Teaching Mathematics in Nigerian Schools
- Factors Influencing the Teaching and Learning Mathematics in Nigerian Schools
- Strategies For Strengthening Students Enrolment in Mathematics
- Summary of Reviewed Literature

Concept of Mathematics

Mathematics reveals hidden patterns that help us understand the world around us. Now much more than arithmetic and geometry, Mathematics today is a diverse discipline that deals with data, measurements, and observations from science; with inference, deduction, and proof; and with

mathematical models of natural phenomena, of human behavior, and of social systems (Salawu Beatrice, 2018).

As a practical matter, Mathematics is a science of pattern and order. Its domain is not molecules or cells, but numbers, chance, form, algorithms, and change. As a science of abstract objects, Mathematics relies on logic rather than on observation as its standard of truth, yet employ observation, simulation, and even experimentation as means of discovering truth.

The special role of Mathematics in education is a consequence of its universal applicability. The results of Mathematics theorems and theories are both significant and useful; the best results are also elegant and deep. Through its theorems, Mathematics offers science both a foundation of truth and a standard of certainty (kunle & Abayomi, 2018).

In addition to theorems and theories, Mathematics offers distinctive modes of thought which are both versatile and powerful, including modeling, abstraction, optimization, logical analysis, inference from data, and use of symbols. Experience with mathematical modes of thought builds mathematical power, a capacity of mind of increasing value in this

technological age that enables one to read critically, to identify fallacies, to detect bias, to assess risk, and to suggest alternatives. Mathematics empowers us to understand better the information-laden world in which we live (Amadin, 2018).

During the first half of the twentieth century, mathematical growth was stimulated primarily by the power of abstraction and deduction, climaxing more than two centuries of effort to extract full benefit from the mathematical principles of physical science formulated by Isaac Newton. Now, as the century closes, the historic alliances of Mathematics with science are expanding rapidly; the highly developed legacy of classical mathematical theory is being put to broad and often stunning use in a vast mathematical landscape. Several particular events triggered periods of explosive growth. The Second World War forced development of many new and powerful methods of applied Mathematics. Post war government investment in Mathematics, fueled by Sputnik, accelerated growth in both education and research. Then the development of electronic computing moved Mathematics toward an algorithmic perspective even as it provided

mathematicians with a powerful tool for exploring patterns and testing conjectures (Salenko, 2017).

At the end of the nineteenth century, the axiomatization of Mathematics on a foundation of logic and sets made possible grand theories of algebra, analysis, and topology whose synthesis dominated Mathematics research and teaching for the first two thirds of the twentieth century. These traditional areas have now been supplemented by major developments in other mathematical sciences in number theory, logic, statistics, operations research, probability, computation, geometry, and combinatory.

In each of these sub-disciplines, applications parallel theory. Even the most esoteric and abstract parts of Mathematics, number theory and logic, for example are now used routinely in applications (for example, in computer science and cryptography). Fifty years ago, the leading British mathematician G.H. Hardy could boast that number theory was the most pure and least useful part of Mathematics. Today, Hardy's Mathematics is studied as an essential prerequisite to many applications, including control of automated systems, data transmission from remote satellites, protection of

financial records, and efficient algorithms for computation. In 1960, at a time when theoretical Mathematics was the central jewel in the crown of applied Mathematics, Eugene Wigner wrote about the "unreasonable effectiveness" of Mathematics in the natural sciences: "The miracle of the appropriateness of the language of Mathematics for the formulation of the laws of Mathematics is a wonderful gift which we neither understand nor deserve." Theoretical Mathematics has continued to adopt (and occasionally invent) increasingly abstract mathematical models as the foundation for current theories. For example, Lie groups and gauge theories exotic expressions of symmetry are fundamental tools in the physicist's search for a unified theory of force.

During this same period, however, striking applications of Mathematics have emerged across the entire landscape of natural, behavioral, and social sciences. All advances in design, control, and efficiency of modern airliners depend on sophisticated mathematical models that simulate performance before prototypes are built. From medical technology (CAT scanners) to economic planning (input/output models of economic behavior), from genetics (decoding of DNA) to geology (locating oil reserves),

Mathematics has made an indelible imprint on every part of modern science, even as science itself has stimulated the growth of many branches of Mathematics.

Applications of one part of Mathematics to another of geometry to analysis, of probability to number theory provide renewed evidence of the fundamental unity of Mathematics. Despite frequent connections among problems in science and Mathematics, the constant discovery of new alliances retains a surprising degree of unpredictability and serendipity. Whether planned or unplanned, the cross-fertilization between science and Mathematics in problems, theories, and concepts has rarely been greater than it is now, in this last quarter of the twentieth century.

Importance of Mathematics in Nigerian Secondary Schools

In teaching Mathematics, the teacher uses ordinary language to communicate mathematical concepts and to clarify thoughts. Language is a means of gradually internalizing experience to the point where actions can process in imagination without recourse their physical repetition. Teaching of Mathematics in the class is not only concerned with the computational

knowledge of the subject but is also concerned with the selection of the mathematical content and communication leading to its understanding and application. So while teaching Mathematics one should use the teaching methods, strategies and pedagogic resources that are much more fruitful in gaining adequate responses from the students than we have ever had in the past. We know that the teaching and learning of Mathematics is a complex activity and many factors determine the success of this activity. The nature and quality of instructional material, the presentation of content, the pedagogic skills of the teacher, the learning environment, the motivation of the students are all important and must be kept in view in any effort to ensure quality in teaching-learning of Mathematics.

For learning mathematical concepts children are initially engaged in activities with concrete materials, then encouraged to make audible descriptions and instructions the concrete aids being withdrawn gradually until, finally, the concepts are internalized in verbal form. Thus language becomes a means of storing experience and facilitating problem solving. Effective learning of mathematical concepts does not result from mastery over activities alone.

It depends on how far teachers are successful in developing language or other symbolic representations, building links with past experiences to formulate corresponding abstractions or laws. The transition from concrete to abstraction depends upon explanations written in mathematical terms. Today a physicist (for that matter, any scientist) cannot pursue his or her studies without extensive use of mathematical language. Even subjects like biology, psychology, etc., which, used to be descriptive, are increasingly using mathematical notions. Persons studying the form and structure of language have also applied Mathematics to explore it. Roger Bacon said "Mathematics is the gate and key of the sciences. Neglect of Mathematics works injury to all knowledge, since he who is ignorant of it cannot view the other sciences or the things of the world. And what is worse, men who are thus ignorant are unable to perceive their own ignorance and so do not seek a remedy."

Mathematics, thus, may be seen as a tool or a means of communication. Interesting studies of language difficulties experienced by children in Mathematics have been made. Some features of mathematical language need special mention:

1. Mathematical Language distinguishes between things and names of things. Number and numeral, and fraction and fractional numbers are a few examples.

2. Some common spoken words are used as technical terms and sometimes even in different contexts. For example, "variable" is used both as a noun and as an adjective; "root" is used as a root of an equation and as in square root, cube root, etc.

3. There are a variety of ways of calling a thing, For example, addition can be referred to as "find the sum", "find the total", "and find the value “ " find the whole", "how many in all?" etc.

4. Abbreviations (or labeling) are used. This usually helps in sustained thinking but sometimes they may not be in standard form or may be used only to avoid some steps in an algorithm. For example using gm, for gram is wrong; using cm is also not correct.

5. Frequently, auxiliary figures and markings are taught when new topics or operations are introduced. For example: to write carrying figure in addition; or "or " in writing equations. 5m x 4m = 20sqm. is not correct because the

multiplier is simply a number, it cannot be concrete. The correct way is (5 x 4)sqm.

6. Mathematical solutions emphasize a specific arrangement of steps in the solution, i.e., an algorithm to develop accuracy of thought and precision In quantitative matters.

7. Like all other languages, the language of Mathematics has its own grammar. It has its own nouns, verbs, adjectives, etc.

The main characteristics of mathematical language are simplicity, accuracy and precision in contrast to ordinary language which can be ambiguous, vague and emotive. Special care is needed in formulating definitions. A good definition should satisfy the following conditions:

1. A definition should be consistent, i.e. it should convey the same meaning of term in all possible situation of the system
2. A definition should not only consist of undefined terms or other previously defined terms, but also the common articles and connectives.

3. A definition should be stated clearly and precisely without redundancy.

Place of Mathematics in Secondary School Education

Mathematics is an important component of school education. Its influence has been so fundamental and widespread that being numerate is becoming more important than being literate.

The following values justify its position.

Social Aspects

The routine activities of daily life demand a mastery of number facts and number processes. To read with understanding much of the materials in newspapers requires considerable mathematical vocabulary. A few such terms are percent, discount, commission, dividend, invoice, profit and loss, wholesale and retail, taxation, etc. As civilization is becoming more complex, many term from the electronic media and computers are being added. Certain decisions require sufficient skill and understanding of quantitative

relations. The ability to sense problems, to formulate them specifically and to solve them accurately requires systematic thinking.

To understand many institutions and their management problem, a quantitative viewpoint (modelling) is necessary. It is illuminating to hear from an economist, an architect, an engineer, an aviator, or a scientist what in Mathematics is helpful to them as workers. Many vocations need mathematical skills.

The child should gain an appreciation of the role played by Mathematics in many fields of work. Since, scientific knowledge and technology are linked with the progress and prosperity of a nation; we should be able to appreciate the role of Mathematics in acquiring these. Mathematics has helped in bringing together the countries of the world which are separated from each other physically. Mathematics helped man to discover the mysteries of nature and to overcome superstitions and ignorance.

Mathematical Aspects

- Mathematics teaches us how to analyze a situation, how to come to a decision, to check thinking and its results, to perceive relationships, to concentrate, to be accurate and to be systematic in our work habits.
- Mathematics develops the ability to perform necessary computations with accuracy and reasonable speed. It also develops an understanding of the processes of measurement and of the skill needed in the use of instruments of precision.
- Mathematics develops the ability to

a) Make dependable estimates and approximations,

b) Devise and use formulae, rules of procedure and methods of making comparisons,

c) Represent designs and spatial relations by drawings, and

d) Arrange numerical data systematically and to interpret information in graphic or tabular form.

Reasons Why Mathematics Should be Studied

The study of Mathematics offers lots of benefits to learners, these include economic empowerment, pleasure, dissemination of financial and economic information. Mathematics allows students get acquainted with the nuance' of literal language i.e. it exposes them to varieties of usage. As a student reads, he/she unconsciously learns and uses the mathematical language (Nwodo, 2011), Arguing further, Nwodo states that since the study of Mathematics exposes learners to varieties of usage, there is the need to expose the Nigerian learner to its study. She reiterates that even science oriented learners should study Mathematics to be < Je to express themselves well as science is written in scientific and statistically, language. Nwodo concluded by stating that the deprivation of the study of Mathematics is the missing link in the Nigerian education system, In a related manner, Williams (1990) observes that the teaching of Mathematics has the practical value of enabling the student to learn about the L2 as well as use it.

Furthermore, Mathematics develops the cognitive, affective and psychomotor domains. For example, students' meta-cognition can be

enhanced through Mathematics. It can be used to develop one's capacity for discrimination, judgment and decision. Buttressing this, Onukaogu (2002) affirms that many of our students are not reflective, critical, strategic arid purposeful in their reading. Mathematics, he states can be used to remedy the situation. One way we can use Mathematics to enhance students' meta-cognition Onukaogu explains is by teaching them to use it in making connections with the contents of their school curriculum and with other experiences they encounter in life.

Mathematics can also be used to develop the other two domains. It can be used to express feelings, emotions and empathy thereby touching on the affective domain. It can also make use of the psychomotor when readers take active part statistics or acting out parts of what they have read (Anthony, 201 1: Fakeye, 20,2).

Saruq (2007) asserts that Mathematics has a dual role as it teaches and entertains through the experiences readers derive from the pieces of mathematical problems they solve or compute. She explains that in whatever form or genre the author decides to relay his/her message, the main point is

that of teaching a moral lesson, and proffering solutions to economic problems. In addition, studying Mathematics introduces and exposes students to different cultures theirs, others in their environment and those from other continents. This helps to widen their horizons and broadens their worldview. It also makes them understand and tolerate others.

Nuta (2011) stressing the importance of Mathematics asserts that it is a means of gaining culture and enriching our knowledge in different areas of retrieving and analyzing economic issues. It gives one the possibility to speak about science or politics even if one does not work in that domain, it affords one the chance to identify with characters read about thus enabling the reader gain clues to solving problems and/or how to react in certain circumstances. She concludes that Mathematics is the perfect means to enrich one's culture, have a repertoire of vocabulary, be able to participate in discussions in different fields and be considered an erudite person. In a related vein, Nwodo (2011) asserts that Mathematics deals with every aspect of life and exposes the reader to innumerable experiences which can help him/her wade through the difficulties inherent in human existence.

Fafunwa in Idowu (2006) asserts that Mathematics provides opportunity for interaction, thinking, generation of ideas, sharing of views/opinions in a more unrestricted atmosphere. Onukaogu (2002) also states that Mathematics can be used to promote self-esteem. He explains that when students read, they can identify themselves with heroes, inventors, great leaders, etc., and see themselves as having the potentials to contribute to societal development.

Furthermore, Cullinan (1993:1) states that when Mathematics is used to connect all the subjects in the school curriculum, it helps children to learn language, learn through language and learn about economic and statistical language.' Lapp and Flood (1993:73) also assert that curriculum experts are unaware that the use of Mathematics as a complement to science textbooks can help students develop both the skills and motivation to pursue scientific inquiry with enthusiasm and success. This is succinctly put by Cohn and Wendt's (1993.57) equation - 'Mathematics + Mathematics = Success'.

Finally, Smith (2016.) submits that an enjoyment and appreciation of Mathematics gives students the ability to develop this into an interest in

books and reading. This will help cultivate a reading habit. In all, through Mathematics, 'the learner achieves a good liberal education, scientific assimilation or acculturation, statistical and technological development and competence, conflict and economic resolution, development of desired and desirable attributes' (Popoola, 2010).

Teaching Mathematics in Nigerian Schools

In schools in Nigeria, Mathematics and Mathematics are merged as one at the Junior Secondary School (JSS) level. The National Curriculum for Mathematics fused the two subjects and is known as scientific Studies. This poses a bit of problem. First, teachers are faced with the problem of finding a balance in the time to allocate for each segment. At the Senior Secondary School (SSS) level, Mathematics is a separate subject with its own three periods per week allocation and is restricted only to science students. To ensure that no science student offers Mathematics, Mathematics is made an option for them and is taken when Mathematics is taken by Arts students.

Speaking in a related vein, Nwodo (2011) questions the labeling of classes as art and science. She contends that such a classification denies

science classes the opportunity of studying Mathematics which affects their numerical and technological proficiency in such a way that they lack vocabulary to express themselves. In addition, she said such students are denied the opportunity of reading science fiction which could widen their scope and knowledge.

In the Nigerian education system, Mathematics ought to be handled with proper, time tested methods backed with adequate provision of texts. Its teaching should not be done anyhow. Vincent (1979) condemns the handling of the subject by teachers who he feels do not have a proper conception of Mathematics resulting in poor and ineffective teaching. Again, Ogunnaike (2002) submits that Mathematics teaching is one of the ways the Nigerian child could be discouraged from social vices like indiscipline, inefficiency, ethnicity, nepotism and corruption plaguing the nation. He contends that classroom experiences in the last millennium have shown that Mathematics has been shoddily handled by most Mathematics teachers at the secondary school level. The reasons according to him are that, in some cases, there were no teachers to handle the subject while in others little or no attention was paid to its importance. In addition, both the teacher and the student

complained of too many books to be read by them resulting in poor performances on both sides, p. 334. Furthermore, Ogden (1997) is of the opinion that Mathematics contributes to students' development. It is therefore in the writer's opinion, a subject all students should study especially at the secondary school level. In spite of these, studies have shown clearly that Mathematics enhances and facilitates lifelong learning skills and strategies in the science and in other spheres and these put together are reasons Nigerian secondary school students should study Mathematics-in-English.

Problems of Teaching and Learning Mathematics in Nigerian Schools

One of the major problems of teaching Mathematics according to Ogunnaike (2002) is poor planning, poor pedagogy and poor presentation in the classroom. This, he affirms has affected students' attitude towards the subject resulting in poor performance. In a related vein, Nwodo (2011) asserts that despite the fact that the study of Mathematics offers learners the opportunity to be proficient in English, there is no dynamic and functional Mathematics policy on ground. She argues that a well-planned Mathematics

curriculum will enhance candidates' performance and raise the standard of education in the country.

Another problem is that of method. Despite the fact that there are specific methods of teaching Mathematics, most teachers teach it anyhow. For example, Ogunnaike (2002), submits that teachers use whatever method is available at their disposal and that most often, teachers use the 'take-your-book-and-read' approach. An approach that is wrong for teaching/learning of Mathematics. This corroborates Labo-Popoola's (2010) assertion that of a button, they can access information needed. Above all, it is believed that students no longer want to study the humanities (Mathematics is one) because they want to be see as science students, even when they are not performing well in the sciences.

Finally, the lack of interest by students, poverty and a dearth of books or high cost of books, ill equipped libraries or total absence of libraries in schools, homes and classrooms are some of the problems facing the teaching and learning of Mathematics in Nigerian secondary schools.

Strategies for Strengthening Students Enrolment in Mathematics

The desire to promote Mathematics among the youth at an early stage calls for urgent attention. It should not be left only for colleges alone because majority of our students are attending grammar schools. In order to equip the individuals with appropriate skills in literary works and to enable such individuals earn income, self-respect, social contract participation and express their creativity as in line with NPE (2004) or NPE (2008), there is need to strengthen the enrolment of students in Mathematics both in secondary schools and universities.

To catch the students young and arouse their interest towards Mathematics education, Onwuchekwa (2006) advocate that Mathematics education which is the umbrella of Art education should be made the bedrock of the Universal Basic Education in particular, Mathematics should be introduced in the primary school level, the forms and benefits of nationalism and patriotism be given to the pupils to arouse their interest in-the area.

Olaitan, (1996) argued to support this view that it is long over-due for the introduction of elementary Mathematics education into the primary

school curriculum. He opined that to sustain any particular behaviours on a child, such child must be exposed to Mathematics studies in early life and that the programme must be introduced into primary education curriculum.

Adenle and Sobowale (2007) asserted that there should be extensive public

Enlightenment of the importance of Mathematics education, particularly in arts related subjects or trade. The status of Mathematics education should be raised through orientation of the attitude of the general public towards seeing dignity in courses leading to the acquisition of creative skills. Extensive use of the media and other means of information should be utilized for this purpose. He further suggested that government should give more support to Mathematics studies at all levels. There should be a concerted effort by all arms of the government to build their own community Art centres. This is being done, but the money is often diverted to other areas by those in authority.

Agada, (2009) reveals that there is need to change the economic status of the graduates of Mathematics. If this is done, it will increase public

awareness of the importance of Mathematics education and serve as an incentive to attract more students into offering Mathematics courses.

Onwuchekua. (2006) confirmed that for more recognition and effective development of Mathematics education in Nigeria, a vertical ladder be created whereby a craftsman could climb to become a technician, then to technologist and may finally become an engineer. The present situation by which a craftsman dies as a craftsman, and a technician retires as a technician is not encouraging. He opined further that a Mathematics graduate be encouraged to further his/her education to broaden his/her knowledge. This type of vertical movement will remove doubt about the abilities and compatibilities of Mathematics education especially the recipient of science trade.

According to Fajimi (2006) as cited by Alika, (2008): government should provide more employment opportunities to graduates with scientific and numerical skills; send them for further training in-line with their skills. He believed that there is also need to change the economic status of the graduates of Mathematics education by awarding scholarship to students

who wish to enroll for Mathematics or science related courses; this will serve as a means to encourage students to offer Mathematics.

Aleburu as cited by Aina (2010) asserted that government enactment of admission quota law will strengthen enrolment trends in Mathematics courses. He suggested that government admission policy of 60% to 40% for prospective candidates seeking admission into tertiary institutions be enforced. He further stressed that government, parents and guardians should encourage youths with high intelligent Quotient (IQ) to register for Mathematics courses and there will be positive change toward the general belief that people have against graduates of higher institutions.

According to Denga (1996) as cited by Owolabi (2006), career guidance and counseling unit should be set up in all secondary schools across the nation to provide the students with proper information in making career choices and parents should not interfere with their work. He also charged the unit with the responsibility of making job information as well as admission opportunities get to the students. In addition, he suggested that seminars or career talk be organized on regular basis and successful historians should be invited as guest lecturers. The researcher agrees with

Owolabi because students need proper guidance to lead them through the choice of career. This can be provided only by guidance and counseling unit using series of tests.

Okeke (1995) as cited in Africa Journal of Studies in Education (2009), in her paper, she argued that Nigeria like other developing countries is faced with the problem of inability of her educators to relate education to employment opportunities. It is practically true in our secondary schools, many teachers are incapable of assisting students to perceive clearly a picture of the world of work, as such the students do not know the relationship of the subjects they are being taught to the various vocational opportunities of the job-markets on the account of inaccurate and inadequate information. The researcher agrees with Okeke, so this information should be made known to the students on time, the need for vocational guidance, as well as occupational information for jobs is essential in Nigeria secondary schools.

Salami (2006) asserted that government should intensify its effort in ensuring that trips and excursions are organized on a regular basis by the

ensuring that trips and excursions are counseling unit. He believed that this would stimulate the interest of the students toward Mathematics. If a student enters the workshop and finds new machines, the tendency to remain and develop in the profession will be enhanced. Government should borrow a leaf from Ghana, most of their senior secondary schools are run by the government. Only a few private senior secondary schools are run by Second work.

Summary of Reviewed Literature

This chapter discussed the review of relevant literature related to this study. They are the problems influencing the teaching of Mathematics among which are poor pedagogical skills, deficiency in the curriculum, inadequate and unqualified teachers to mention but a few. The review also highlighted on the importance of studying Mathematics such as inculcation of statistical and technological skills on part of students, broadening their horizon knowledge on the computation and analysis of economic data skill amongst others. The literature review also highlighted on the strategies for improving the status of Mathematics in our schools such as counseling,

parental guidance, orientation on the benefits derived from the study of Mathematics.

However, it is pertinent to note that there is a gap to be filled as regards the fact that not much work has been done by scholars on this topic hence the present researcher seeks to fill such gap.

CHAPTER THREE

METHODOLOGY

This chapter deals with the methods and procedures that will be adopted for carrying out study and will be presented under the following sub-headings.

- Design of the Study
- Population of the Study
- Sample and Sampling Technique
- Research Instrument
- Validity of the Instrument
- Method of Data Collection
- Method of Data Analysis

Design of the Study

The description survey research design will be adopted by the researcher to collect information from a large population using sample to generalize. This design is relevant since the researcher is required to undertake a systematic collection, analysis and presentation of data to give account of the characteristic of a particular individual, group, or the state of events.

Population of the Study

The population of the study consisted of all fourteen public secondary schools in Oiedo local Government in Edo State. The total population is one hundred and thirty eight thousand and five hundred and seventy (138,570) people (Edo state Ministry of Education, lyaro, 2018)

Sample and Sampling Technique

The sample for this study comprised 28 teachers (16 female and 12 male) in Secondary Schools in Oredo local government. Multi stage sampling technique was use in the selection of the sample as follow;

Stage 1: involve stratifying the students into wards using cluster selection

Stage 2: involved stratifying the students into male and females

Stage 3: involve using proportionate stratified sampling technique for selecting 120% female and 80% students of in secondary schools in Oredo local government Area as respondents sampled.

Research Instrument

The study used a structured questionnaire titled the Factors Influencing the Teaching and Learning of Mathematics in Secondary schools Questionnaire (MAFTQ) as instrument for data collection. The questionnaire was developed based on the study objectives and research questions.

Section A: demographic information: this section was structured to elicit information on the respondent such as age, gender, marital status, and parent level of education.

Section B: This elicits information on the Status of Mathematics in Secondary schools. Respondent of each items was rated on a 4 point scale ranging from 1 which indicate strongly disagree to 4 which indicates strongly agree.

Validity of the Instrument

The instrument will be validated by three experts, two in the department of Curriculum and Instructional Technology and one from measurement and evaluation department, all from University of Benin,

Benin City. Appropriate correction and recommendations made by the experts were affected in the instrument to ensure that the questions were relevant before administering it to the respondents.

Method of Data Collection

Data is collected from the subjects by administering the instrument I he Factors Influencing the Teaching and Learning of Mathematics Questionnaire (MAFTQ). The will be distributed by the researcher and two (2) trained assistants. The completed copies will be collected on the spot to ensure maximum return. The return questionnaire generated the data analyzed for the study.

Method of Data Analysis

The date collected will be analyzed by using mean and standard deviation with a cut-off mean of 2.50.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter presents of results and discussion of the findings of the study.

Research Question One: To what extent does the perception of teachers constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?

Table 1: Mean and Standard Deviation on perception of Teachers' on the challenges in the Teaching and Learning of Mathematics in Secondary Schools (N=28)

S/N		Mean	SD	Remark
1.	Teachers of Mathematics are regarded as boring hence my reason for my lackadaisical attitude towards the subject	1.60	.503	Disagree
2.	Teachers of Mathematics are accorded low recognition by government agencies hence my reluctance to do my best in the discharge of my function	3.45	.510	Agree
3.	The reluctance of Mathematics to promote Maths teachers as at when due has affected my attitude towards the subject	3.45	.686	Agree
4.	Mathematics teachers are poorly renumerated by government authorities has accelerated my poor attitude to work	3.20	.834	Agree
5.	Teachers of Mathematics are accorded more respect than their counterparts in other subjects hence my reason for exhibiting expertise in the discharge of my duties	3.25	.550	Agree
	Grand Mean	**2.04**	**0.04**	

Cut-off mean = 2.50.

In Table 1, the mean scores ranged from 1.60 to 3.45 while the standard deviation on ranged from .503 to .834. This clearly shows that the respondents agreed since each mean is greater than the cut-off mean of 2.50.Therefore, the perception of teacher constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.

Research Question Two: To what extent does teachers' methodology constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?

Table 2: Mean and Standard Deviation on Teachers Methodology Constituting a Challenge in the Teaching and Learning of Mathematics in Secondary School (N=28)

S/N		Mean	SD	Remark
6.	The inability of Mathematics teachers to engage in field trips has accelerated the poor comprehension of concepts by students	3.50	.688	Agree
7.	The application of orthodox lecture method of teaching as the only tool for teaching Mathematics has stimulated the poor knowledge of the subjects by students.	3.60	.598	Agree
8.	The inability of teachers to demonstrate what has been taught in class for students comprehension has accelerated the poor knowledge of Mathematics	2.55	1.191	Agree
9.	The inability of teachers to make reference to the modalities involved in the explanation of key facts during the instructional process has been responsible for the poor knowledge of students in Mathematics	3.10	.641	Agree
10.	The inability of teachers to make reference to the modalities involved in the explanation of key concepts is responsible for the poor knowledge of students in Mathematics	2.59	.542	Agree
	Grand Mean	**2.92**	**1.04**	

Cut-off mean = 2.50

The data in Table 2 showed that the mean scores of the items ranged from 2.55 to 3.60 indicating that the respondents agreed since each mean is greater than the cut-off mean of 2.50. The standard deviation of the items ranged from 542 to 1.191. This indicated that the respondents were close in

their responses on the perceived lack of skills by Mathematics teachers in teaching the subject. Therefore, the teachers' Methodology constitutes a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.

Research Question Three: To what does shortage of instructional facilities constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government?

Table 3: Mean and Standard Deviation on the Extent to Which Inadequacy of Instructional Facilities Constitute a Challenge in the Teaching and Learning of Mathematics in Secondary Schools (N=28)

S/N	Items Statement	Mean	SD	Remark
11.	There is the absence of ICT facilities in my school which has resulted in my inefficiency on the job	2. 89	1.09	Agreed
12.	Most of the apparatus in my school are faulty and inadequate to accelerate an effectiveness in the instructional processes	3.24	.698	Agreed
13.	Several students share one set of apparatus at the same time has plundered the ineffectiveness in the instructional process	2.62	1.16	Agreed
14.	Epileptic power supply in my school has stimulated the inconsistency in teachers use of instructional resources	2. 88	1.13	Agreed
15.	The faculty nature of the few available resources has accelerated the poor use of the resources in my school	3.50	.746	Agreed

Cut-off mean = 2.50

Table 3: shows that the mean responses ranged from 2.62 to 3.50, which the standard deviation ranged from .698 to 1.13.The respondent

agreed since each mean is greater than the cut-off mean of 2.50. Therefore, it can be concluded that shortage of instructional facilities constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.

Research Question Four: To what extent does shortage of qualified teachers constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?

Table 4: **Mean and Standard Deviation on the Extent to which Shortage of Qualified Mathematics Constitute a Challenge in the Teaching and Learning of Mathematics in Secondary School (N=28)**

S/N		Mean	SD	Remark
16.	The inability of most teachers to effectively implement the curriculum of Maths in most schools is a problem of teaching of the subject	3.10	.852	Agree
17.	The ineptitude of most teachers to demonstrate in-depth of knowledge in the course of the lesson has affected the teaching of the subject	3.25	.851	Agree
18.	The inability of teachers to utilize the requisite pedagogical skills in the instructional process has stimulated the poor response of students in the subject area.	3.15	.875	Agree
19.	The inability of teachers to utilize learner centred methods in the instructional process has stimulated the poor response of students in the subjects	3.35	.745	Agree
20.	The inability of teachers to demonstrate professionalism in the discharge of functions has stimulated a blockade in the process.	3.01	.546	Agree
	Grand Mean	**3.05**	**0.57**	

Cut-off mean = 2.50

The data in Table 4: Showed that the mean scores of the items ranged from 3.01 to 3.35. All the items had their means above different point relating that the respondents agree since each mean is greater than the cut-off mean of 2.50. The standard deviation of the items ranged from .546 to .852. This indicated that the respondents were close in their responses. Therefore, the shortage of qualified teachers constitute a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.

Discussion of Findings

The findings of the study in research question one revealed that extent to which the perception of teachers constitute a challenge in the teachings and learning of Mathematics. The findings of the study revealed that the teachers have a negative perception to the teaching of the subjects. The findings of the study is in consonance with the findings of Ochuko (2018) that the insensitivity demonstrated by government in promoting English Language teachers in secondary schools in Oyo State has accelerated their incessant strike actions and lackadaisical attitude in teaching the subject. The findings of the study is also in agreement with the findings of Agbaire (2018) that the poor remuneration of Chemistry teachers in public secondary

schools has exacerbated the incessant cases of teachers absenteeism inherent in these schools.

The findings of the study in research question two revealed the extent to which Mathematics teachers are adequately equipped with skills in teaching the subject. This is in consonance with the findings of Chukwuma (2019) that the incompetence exercised by teachers in classroom management and control in terms of instilling discipline and providing a conducive atmosphere in the classroom has accelerated the poor execution of the instructional process in these schools. This is also in agreement with the findings of Asemota & Azubuike (2016) that the ineptitude demonstrated by teachers in the utilization of instructional resources in the teaching of Physical education has stimulated the poor implementation of the curriculum of the subject.

The findings of the study in research question three revealed the effects of inadequacy of instructional resources in the teaching of Mathematics. The findings of the study is in consonance with the findings of Anumudu (2017) that the faulty nature of the few available resources in teaching Business Education has accelerated the inconsistency of teachers in

the utilization of these resources in the instructional resources. This is also in agreement with the assertions of Olumukoro(2017) that the ineptitude of teachers in improvising the few available resources in the teaching of Mathematics in secondary schools in Akure South Local Government Area has accelerated the under -utilization of ICT facilities in the teaching of the subject.

The findings of the study in research question four revealed the effects of shortage of qualified Mathematics teachers in the teaching of the subject. This is in consonance with the findings of Salenko (2017) that the paucity of competent teachers who have in-depth knowledge of subject area of teaching of English has been responsible for the poor delivery of the subject in secondary schools in Ondo State. This is also in consonance with the findings of Chukwubueze (2014) that the ineptitude of teachers in adopting learner centred approach in the teaching of Vocational education courses affected the effective delivery of the subject in the secondary schools in Nigeria.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

This study investigated the factors influencing the teaching and learning of Mathematics in secondary schools in Oredo local government Area in Edo State. Four research questions were raised to guide the study.The study adopted the descriptive survey research design. The population of study comprised of all the 565 (five hundred and sixty five) Mathematics teachers in the sixteen (16) public secondary school in Oredo Local Government Area The study adopted the simple random sampling technique in selecting 28 (twenty eight) Mathematics teachers from five randomly selected schools. A structured questionnaire titled: Factors influencing the Teaching and Learning of Mathematics Questionnaire (MAFTQ) was used for data collection. The instrument was a four point modified Likert scale question type of very high extent (SA) 4 points, high extent (A) 3 points, low extent (D) 2 points, and very low extent (SD) 1 point. In this study 37 items of interest that were measured.

The following were the findings;

1. The study revealed that the perception of Teachers hampered the effective teaching and learning of Mathematics in secondary schools in Oredo Local Government Area.
2. The study revealed that the teachers' methodology constitutes a challenge in the teaching and learning of Mathematics in secondary school in Oredo Local Government Area.
3. The instructional Facilities for teaching and learning of Mathematics was inadequate for teachers to utilize in impacting knowledge .
4. The shortage qualified Mathematics teachers constituted a challenge in the teaching and learning of Mathematics in Oredo Local Government Area.

Conclusion

Based on the findings, it can was concluded that;

1. The perception of the teachers influences the teaching and learning of Mathematics in secondary schools.
2. The teachers' Methodology influences the teaching and learn of Mathematics in secondary schools.

3. Inadequacy Instructional Facilities affects the teaching and learning of Mathematics in secondary school.
4. Inadequacy of qualified teachers influences the teaching and learning of Mathematics in secondary schools.

Recommendations

Based on the findings conclusion, the following recommendations were made:

- There should be adoption of learner centred methods by teachers to accelerate the stimulation and retention of learners interest in the teaching and learning process thereby enhancing students comprehension of concept taught in class
- There is need for government and other stakeholders in the education industry to regularly and periodically organize in-service seminars for teachers to be adequately equipped with skills to impart knowledge to students to assimilate Mathematics topics.
- Government should increase her annual budgetary allocation to secondary school education to facilitate the procurement of instructional resources in the teaching of Mathematics in secondary

schools.

- There should be regular and periodic training of Mathematics teachers to adequately equip them and to keep abreast with modern instructional strategies in the teaching of the subject as it would facilitate an enhancement in the quality of the instructional delivery inherent in the subject.
- There should be the integration of competent Mathematics teachers in the teaching of the subject as it would help to enhance students' comprehension of topics and concepts in the subject area.

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APPENDICES

Presentation of bio data information

Table 1: **Distribution of respondent sex**

Variable	Frequency	Percentage
Male	12	42.8
Female	16	57.1
Total	28	100.0

In table 1, 12 representing (42.8%) of respondent were males while 16 representing (57.1%) of the respondent were female. From the foregoing, it could that majority of the respondents were females.

Table 2: **Distribution of Respondents by Educational Qualification**

Variable	Frequency	Percentage
NCE	6	21.4
B.ED	17	61
M.ED	3	11
PH.D	2	7.1
Total	28	100.0

In table 2, 6 representing (21.4 %) of the respondent were NCE degree holders, 17 representing (61%) of the respondents were Bachelor degree holders, 3 representing (11%) were Masters degree holders while 2 representing 7.1% were decorated degree holders. From the foregoing, it could be deduced that majority of the respondents were Bachelor degree holders.

Table 3: **Distribution of the Respondents by Years of Experience**

Variable	Frequency	Percentage
1-9 years	19	67.8
10 years and above	16	32.1
Total	28	100.0

In table 3, 19 representing (67.8%) of the respondents had working experience from 1-9 years while 9 representing (32.1%) of the respondents has working experience from 10 years and above. From the foregoing, it could be deduced that majority of the respondents had working experience of 1-9 years.

DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY

FACULTY OF EDUCATION

UNIVERSITY OF BENIN

Dear Respondents,

FACTORS INFLUENCING THE TEACHING AND LEARNING MATHEMATICS IN SECONDARY SCHOOLS IN OREDO LOCAL GOVERNMENT AREA.

I am an undergraduate student of Mathematics, University of Benin, Benin City, Edo State. I am currently carrying out a research on the factors influencing the Teaching and Learning of Mathematics in Public Secondary schools in Oredo Local Government Area of Edo State.

Please kindly help to complete the questionaire as your frank response will aid this research a great deal. This is purely for academic purpose and the information you provide will be treated as confidential and will be used only for the purpose of the research.

Thanks for your cooperation

Yours sincerely

FABEKU EMMANUEL

TEACHERS QUESTIONNAIRE

DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY

FACULTY OF EDUCATION

UNIVERSITY OF BENIN

FACTORS INFLUENCING THE TEACHING AND LEARNING MATHEMATICS IN SECONDARY SCHOOLS IN OREDO LOCAL GOVERNMENT AREA.

SECTION A: (Socio-Demographic variable of Respondents)

Gender: Male [ ] , Female [ ]

Educational Qualification: NCE [ ], B.ED [ ], M.ED [ ], PH.D [ ]

Year of Experience: 1-9 years [ ] , 10 years and above [ ]

Indicate your opinion by Ticking [√]

SD = Strongly Disagree , D = Disagree, A = Agree, SA = Strongly Agree

SECTION B: (Factors influencing the teaching of Mathematics in secondary schools)

S/N	ITEM	SA	A	D	SD
To what extent does the perception of teachers constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?					
1	Teachers of Mathematics are regarded as boring hence my reason for my lackadaisical attitude towards the subject				
2	Teachers of Mathematics are accorded low recognition by government agencies hence my reluctance to do my best in the discharge of my function.				

3	The reluctance of Mathematics to promote Maths teachers as at when due has affected my attitude towards the subject.				
4	Mathematics teachers are poorly renumerated by government authorities has accelerated my poor attitude to work.				
5	Teachers of Mathematics are accorded more respect than their counterparts in other subjects hence my reason for exhibiting expertise in the discharge of my duties				
To what extent does teachers methodology constitute a challenge in the teaching of Mathematics in secondary schools in Oredo Local Government Area?		**SA**	**A**	**D**	**SD**
6	The inability of Mathematics teachers to engage in field trips has accelerated the poor comprehension of concepts by students				
7	The application of orthodox lecture method of teaching as the only tool for teaching Mathematics has stimulated the poor knowledge of the subjects by students.				
8	The inability of teachers to demonstrate what has been taught in class for students comprehension has accelerated the poor knowledge of Mathematics				
9	The inability of teachers to make reference to the modalities involved in the explanation of key facts during the instructional process has been responsible for the poor knowledge of students in Mathematics				
10	The inability of teachers to make reference to the modalities involved in the explanation of key concepts is responsible for the poor knowledge of students in Mathematics				
To what extent does shortage of instructional facilities constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area.		**SA**	**A**	**D**	**SD**
11	There is the absence of ICT facilities in my school which has resulted in my inefficiency on the job.				

12	Most of the apparatus in my school are faulty and inadequate to accelerate an effectiveness in the instructional processes.				
13	Several students share one set of apparatus at the same time has plundered the ineffectiveness in the instructional process.				
14	Epileptic power supply in my school has stimulated the inconsistency in teachers use of instructional resources.				
15	The faculty nature of the few available resources has accelerated the poor use of the resources in my school.				
To what extent does shortage of qualified teachers constitute a challenge in the teaching and learning of Mathematics in secondary schools in Oredo Local Government Area?		**SA**	**A**	**D**	**SD**
16	The inability of most teachers to effectively implement the curriculum of Mathematics in most schools is a problem of teaching of the subject				
17	The ineptitude of most teachers to demonstrate in-depth of knowledge in the course of the lesson has affected the teaching of the subject				
18	The inability of teachers to utilize the requisite pedagogical skills in the instructional process has stimulated the poor response of students in the subject area.				
19	The inability of teachers to utilize learner centred methods in the instructional process has stimulated the poor response of students in the subjects				
20	The inability of teachers to demonstrate professionalism in the discharge of functions has stimulated a blockade in the process.				