TEACHERS' PERCEPTION ON THE CAUSES OF FAILURE OF STUDENTS IN BIOLOGY IN SECONDARY SCHOOLS

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JUNE 2024

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A PROJECT SUBMITTED TO THE DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY (CIT), FACULTY OF EDUCATION, UNIVERSITY OF BENIN, BENIN CITY IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE BACHELOR OF SCIENCE (ED) DEGREE IN INTEGRATED SCIENCE

JUNE 2024

CERTIFICATION

This research work was carried out by **IYERE OKANINEMHEN FRANCA** with matriculation number: EDU1713971 in partial fulfilment of the award of Bachelor of Science Degree Education of Faculty of Education, University of Benin, Benin City, Nigeri

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DEDICATION

This Project is dedicated to God Almighty, the Author and finisher of my faith and to myself for staying strong.

ACKNOWLEDGEMENTS

For the success of this programme, I give all the glory and adoration to God almighty for the strength and keeping me alive all through the start of this project. My special thanks go to my supervisor Dr. Mrs EO Eromosele for her guidance and corrections, I appreciates her for creating time to go through my work despite her busy schedule. May the good Lord continue to bless and keep you.

I am also grateful for the Head of Department of Curriculum and Instructional Technology (CIT) Dr. Jesurobo, Mrs blessing Uwoye and all the lectures and staffs of Faculty of Education for their input and contribution in her Educational journey. I also thank all the members of Curriculum and Instructional Technology, as well as the Dean of Education.

I also acknowledge my family THE IYERES for their love and support, and to my husband mr Ezekiel Amayo thank you for your support to my wonderful daughter thank you for your understanding.

And to my friends and course mate I met in this citadel of learning mrs Esohe Izevbigie, perpetual oseyiomon and others I say thank you all for your love and encouragements

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ABSTRACT

The study investigated teacher's perception on the Causes of Failure of Students in Biology in Secondary Schools in Egor Local Government Area of Edo State. In order to achieve the objectives of the study, two research questions and one null hypotheses were formulated to guide the study. Descriptive survey study research design was adopted by the study.

The population of this study consisted of all Biology teachers in the thirteen (13) public secondary schools in Egor Local Government Area of Edo State. The number of teachers for this study is made up of thirty (30). The sample for the study was 30 Biology teachers from ten (13) randomly selected public secondary schools. The purposive sampling technique was adopted by the study to select the entire thirty (30) Biology teachers to make up the sample for the study. A structured questionnaire titled: "Teachers' Perception of the Causes of Failure of Students in Biology Questionnaire" (POTBQ) was used for data collection. The instrument was validated by three experts, the researchers' supervisor and two experts in Department of Curriculum and Instructional Technology, University of Benin, Benin City. Their opinions, suggestions and recommendations of these experts was used to produce the final instrument. The questionnaire were personally administered to all the respondents in the various schools after due permission was obtained from the principals. This was done in collaboration with the help of the subject teachers in the school who assisted with the distribution and collection of the questionnaire. The data collected were analyzed using descriptive statistics of frequency, mean (x), and standard deviation (SD). Frequency, mean and standard deviation was used to answer the research questions.

The study found that Inadequate training of teachers affects students' performance and there are no adequate instructional materials for the teaching and learning of Biology and in most school the teachers do not make use of instructional materials. Based on the findings of the study, it was recommended amongst others: The government should put into consideration professional training and qualifications of teachers during employment to ensure better outcomes during examinations. With this, only teachers with professional qualifications should be employed to teach Biology in our Secondary Schools.

CHAPTER ONE

INTRODUCTION

Background of the Study

Science is a special type of discipline with peculiar characteristics, the prominent among which is the approach through which knowledge is sought. This approach is known asscientific method. Scientific method is a logical, rational and systematic process by which knowledge in science is acquired. The steps involved in scientific method are observation, hypotheses, predictions, experimentations, conclusion and host of others (Ezeh, 2018). Science is both a process (scientific method) and a product (knowledge, fact and principles). Both the process and product of science are acquired through education and this is specialized type of education such as science education. Science plays important roles in the society because it relates to our daily life and career. The importance of science in our society made the Federal Government of Nigeria, through the Federal Ministry of Education to introduce science subjects in the nation's secondary school curriculum. Biology is one of such subjects introduced.

Biology is a branch of science that deals with the study of living things, which includes human-beings (Michael, 2018). Biology has many branches which include; zoology, botany, ecology, genetics, morphology, anatomy, physiology, histology, microbiology, evolution, cell Biology to mention but a few. Many societal issues are biology-based. These include biodiversity, genetically modified organisms, reproductive

technologies, prolongationof life, food production, tourism industry (biological gardens) and processing industries. All of these issues have involved improvements that meet human needs and so this twentieth century has been considered as 'the age of biology' (Reiss, 2018).

The knowledge of Biology helps in checking environmental degradation such as desertification, erosion, water hyacinth, land, air and water pollution. The cardinal objectives of Biology education are to prepare students to acquire: adequate laboratory and field skills in biology; meaningful and relevant knowledge in biology; ability to apply scientific knowledge to everyday life in matter of personal and community health and agriculture; lastly reasonable and functional scientific attitudes (National Policy on Education (NPE), 2016).

Perception has been defined variously by different people. To some, it is a way of regarding, understanding or interpreting something. To some others, it is a kind of awareness. In line with this, Brignall (2019) defines perception as the process by which people become aware of the world around them through their senses. That is, perception is a set of processes by which an individual becomes aware of and interprets information about the environment. It is a way by which we interpret our experiences. What people often observe or assess as your ability to be a leader and your effectiveness becomes their perception. This therefore means that what teachers observe and assess as the causes of

mass failure of students in Biology in the school system is the teachers' perception of the perceived causes.

One thing common to all these definitions is 'senses.' All show the important role senses play in perception. They do not only allow people to perceive their environment, they also enable them to act in response to what they perceive. This means that whatever meaning an individual gives to a situation or attaches to something will affect or shape the choice and action the individual takes in response to the situation. The researcher sees perception as the vision of the mind. In the context of this study therefore, perception means how Biology teachers in Oredo Local Government Area visualize or see as the cause of mass failure of students in Biology in secondary schools. In essence, perception here refers to the particular way one understands somebody or something. Teachers' perception in this regard therefore, refers to the particular way Biology teachers understand the cause of failure of students in Biology in secondary schools in Oredo Local Government Area in the primary school system.

Teachers are very important people in the life of a nation. They train school children or students and equip them with appropriate knowledge and skills that will enable them to face the challenges of life as they grow up and subsequently take over the mantle of leadership of their societies in their later years. Rosado (2012) says teachers are the gate keepers to the doors of education and ultimately to the doors of personal advancement and of the wellbeing of the society and the nation. The teacher is that

person who instructs and directs others and preaches without ordination. Teachers exert a lot of influence on the character formation and socialization process of the children within the learning environment. There must be good and cordial relationship between the people that hold the key to the doors of knowledge (teachers) and the people (supervisors) that are responsible for the supervision of how the door is opened and what takes place inside the room (the classroom), that is, teaching.

Despite the importance of biology, students' achievement in the subject from West African Secondary School Certificate Examination (WASSCE) has been poor (Glasson, 2019). Available data on students' performance in Biology in West African Senior School Certificate Examinations (2017, 2018 & 2019) revealed that on the average, more than 80 percent of students scored below credit level in the past three years in the WASSCE; the aspects of Biology which students find difficult in WASSCE are practical questions on food test, examples carbohydrates, proteins and fats/oils, this indicates that students lack basic practical principles such as observation, and interpretation of the specimens provided for the examination (WAEC Chief Examiners Report, 2017, 2018 & 2019). Enebechi (2019) stated that some Biology teachers fail to conduct Biology practical along-side every topic treated during lessons, until a few days to examination when they will use WAEC specimens to conduct practical for their students.

Researcher have ascribed this poor performance to many factors like the method adapted by teachers for teaching, lack adequate learning facilities etc. Teachers been the closet contact to the students, they are in a better position to tell the area where student are having difficulties on the teaching and learning process as well as the presumed causes of failure of students in biology. Hence the need for this research: to evaluate teachers' perception on the causes of failure in teaching and learning of biology.

Practical work is a unique strategy of teaching and learning of biology because it enables science students to observe and manipulate materials to demonstrate certain aspects of the subject matter, which have been learnt in the class through lectures, discussion and textbooks. Researchers have seen the need to make teaching and learning interactive and learner centered. Poor teaching methods such as lecture and demonstrations used by secondary school teachers without involving students have been found to contribute to poor achievement in biology.

The perceived lack of laboratory facilities in public schools would result in opposite of what is obtainable in the schools and students posted to schools do not like stay even if they agree to work. It has been observed that most of the students posted to public schools in Edo State, resident in the capital city of Benin-City and go to school two to three days out of the five working days in week and this making secondary schools comprehension of contents of Biology practical work very slim, with few network coverage necessary to facilitate the comprehension of contents of Biology practical work

by students. This trend is likely responsible for the poor assimilation of contents of Biology practical work by students' in public schools.

Researcher have generally shown that teacher`s influence affect students` attitude towards subjects. It will be observed that the behavior of most Biology teachers appears to deviate from the expected normal behavior of teachers. They tend to exhibit very "queenish" characteristics which scares students away from Biology. Some Biology teachers create the impression to the students that Biology is difficult and not meant for everybody to study except for those with exceptional endowment like themselves who teach the subject. In this sense, students seem uninterested in learning the subject thereby leading to poor academic performance in both internal and external examinations.

The relationship between teacher experience and student achievement is difficult to interpret because this variable is highly affected by market conditions and/or motivation of women teachers to work during the child-rearing period. Unqualified and non-specialist teachers, recruited in our secondary schools to teach Biology seems to be a major and serious impediment to effective teaching and learning. This has seriously hindered the subject as Adetola, (2018), states that the quality of education falls because some teachers who are not qualified to teach a particular subject are recruited into our schools today. It is observed that one cannot give what he or she does not have. Those who understand the social and educational significance of a subject, teach with greater success than those who teach it because it appears on the syllables and timetable.

Students seem to perform poorly due to lack of adequate preparation, inability to understand question that demand a high level of thinking, flagrant breach of rubrics, thus answering more question than required due to poor command of Biology. Students appear to feel that Biology does not require continuous and serious attention like other subjects such as mathematics, physics and chemistry. They appear to put up a nonchalant/liaises-fair attitude towards the subject. Others believe it is an "A" subject. As a result, the students appears to make little preparation before entering for Biology examination. They appear to be more interested in whatever short cut that is available to obtain the certificate and go their ways.

Statement of the Problem

There seem to be a consistent decline in the performance of students in public examinations conducted by the West African Examination Council (WAEC) in sciences across the country over the years (Agogo, 2017; Samba & Eriba, 2018). The mean performance of students in West African Senior Secondary School Certificate Examination (WASSCE) has continued to lower the years. Often the teacher is blamed for the perceived poor performance among students, also attitude towards the subject. Ahmed & Abimbola (2017) alleged that because of its numerous importance, Biology is the observed to be the most popular choice, among science subjects nationwide, offered by candidates sitting for the senior secondary school certificate examinations.

Experiencing difficulty in Biology could be attributed to many factors such as classrooms learning environment, lack of interest in learning Biology from society among others. Designing learning environment while ignoring students' interest and expectations seems to cause several learning problems as well as decreasing interest in Biology. Specifically, in Edo State public secondary schools is that due to the nature of Biology, Biology learning is generally based on memorization. Biology includes many abstract concepts, events, topics, and facts that students have to learn. This seems to make it hard for students to learn. WAEC Chief Examiners' Report 2019 revealed that students have poor performance in Biology. Out of 56, 768 students that enrolled 16, 213 pass was recorded which invariably means 23% failed. Recommendations from the Chief Examiners' Report emphasized that students perform Extremely bad in calculation skills, poor or lack of exposure to practical activities and inability of students to pay good attention to the study of Biology which also revealed some high level of difficulty by students in assimilating some concepts and topics in the subject.

The WAEC chief examiner's reports further stated that this could be attributed to the nature of science itself and its teaching methods as well as the level of organization and the abstract level of the concepts. In the biology Curriculum, it is evident that virtually all the concepts have practical application. If lack of exposure to practicals in biology, paucity of qualified Biology teachers, shortage of experienced teachers, and poor teaching method as emphasized by the chief examiner's report are the major cause of

poor performance of students in Biology. Therefore, establishing the true perception of teachers on the causes of failure of students in Biology in secondary schools in Egor Local Government Area of Edo State is the concern of this study.

Research Questions

The following research questions guided the study:

1. What are teachers' perception on the causes of failure of biology students?
2. Are teachers perception on the causes of students failure significantly different by the sex of teachers?

Hypotheses

Research Q1 will be answered directly while Research Q2 will be hypothesized thus:

1. Teachers' perception on the causes of failure of students in biology is not significantly different by sex.

Purpose of the Study

The main purpose of the study is to investigate teachers' perception on the perceived causes of students' failure in Biology. Specifically, the study intends to:

1. Ascertain whether there is difference in the perception of teachers on the causes of students failure in Biology based on sex.

Significance of the Study

It expected that findings of the study would be of immense benefit to the following: Government, curriculum planners, principals, students, researchers to mention but a few:

The findings of the study would stimulate and arouse the interest of government to increase its budgetary allocation to secondary schools that would facilitate the quality of Biology laboratories, procurement of laboratory apparatus for teaching and learning of Biology, increased enumeration of teachers. In the sense, the frequency of the use of laboratory in the teaching of Biology would be improved.

The findings of the study would stimulate the interest of educational planners to as a matter of urgency organize regular and periodic seminars, symposia, and workshop that would help to increase teachers knowledge, pedagogical skills in order to facilitate the impartation of knowledge of Biology to the students. This is sequel to the fact that the quality of students' academic performance in Biology is heavily dependent on the quality of teachers.

The findings of the study would also inspire principals of these schools to adopt mechanisms that would facilitate the employment of qualified Biology teachers in the teaching of the subject. In this sense, the trends of qualified Biology teachers handling the subject would be drastically reduced**.** Finally, the study would serve as a source of reference materials to future researchers thereby contributing to a body of knowledge.

Scope of the Study

The scope is designed to cover teacher's perception on the Causes of Failure of Students in Biology in Secondary Schools in Egor Local Government Area of Edo State. The study will cover the following areas: It also covered the influence of gender, location

and teachers' qualifications, experience, teaching methods on teachers' perception on the causes of failure of students in Biology. However, the study would be delimited to Biology teachers in Public Secondary Schools (SSS) in Egor Local Government of Edo State.

Definition of Terms

The following operational definitions of terms are explained for the study:

Teachers' characteristics: These are some of the teachers' variables such as qualification, work experience, sex.

Academic performance: This refers to achievement of students' scores obtained by students in Biology test administered to students in schools.

Work experience: This express the length to time a Biology teacher has been on the number of years a teacher has been teaching

Teachers' Method: This is concerned with an individual's ways of applying the various pedagogical strategies in teaching Biology.

Teachers' qualification: This refers to the academic degrees possessed and the level of training undergone by the teacher

CHAPTER TWO

REVIEW OF LITERATURE

The chapter dealt with the presentation of review of relevant literature on teachers' perception of the causes of failure of students in Biology and shall be discussed under the following sub-headings:

- Concept of Teacher
- Concept of Perception
- Concept of Biology
- Importance of Biology in Nigerian Secondary Schools
- Factors Promoting Students Failure in Biology
- Review of Related Empirical Studies
- Summary of Literature Review

Concept of Teacher

The concept of a teacher is one that cannot easily be defined considering the numerous roles he or she plays in the school system and in the life of school children and societies. Mbise cited in Zombwe (2019), defines a teacher as a person who has knowledge, skills and special training in teaching, explaining and educating. He also stresses that a teacher must be a person who is capable of creating behavioral changes in terms of cognitive, psychomotor as well as affective domains of learners. In a related development, Zombwe also cited Julius Nyerere of Kenya as saying that:

”*a teacher is the only person who is capable of imparting knowledge and shaping the youths to the wider scope of knowledge. Teachers are capable of living and moulding the youths such that their power is paramount as they determine the fate of the society...” (Zombwe, 2019:3)*

Also, Kimani et-al (2017) posit that teachers stand in the interface of transmission of knowledge, values and skills in the learning process. This shows how valuable the roles of teachers are in the life of individuals and the society. Teachers, by their roles are leaders to children; they play a very vital role in their character formation just like Maduewesi (2018) noted earlier. They are also capable of leading and moulding the youths and preparing them for leadership positions as they journey through life. Since both teachers and parents live with the children longer than any other person or persons, they (teachers) are capable of having both negative and positive influence on the children which will mar or make them (Senge, 2019).

Going further, Senge asserts that a teacher is that expert who is capable of imparting knowledge that will help learners to build, identify and acquire skills that will be used to face the challenges of life. This, ultimately, leads to producing educated and skilled persons who can use their skills and education to reduce poverty/unemployment or create employment as well as have life skills that will enable them interact well in the society. There are also other definitions of a teacher. The Federal Republic of Nigeria (FRN, 2004) defines a teacher as that individual that has been professionally trained in any teacher education programmes of any of the following; Colleges of Education, Faculties of Education, Institutes of Education, National Teachers Institute, School of

Education in the Polytechnics, Nigerian Institute for Nigerian languages, and the National Mathematical Centre. That is to say, any person outside these categories of institutions would not be recognized, accepted or regarded as a teacher in Nigeria. This therefore, shows that the minimum qualification for teaching in primary schools in Nigeria is the Nigeria Certificate in Education, (NCE.) A teacher in the researcher's view is that person who has the prerequisite skills to and actually imparts knowledge, experience, skills and attitudes to others in or outside the classroom. He is someone who has gone through professional teacher training and acquired the relevant teaching qualification and is involved in the teaching learning process.

Based on the above, it is therefore the duty of teachers to impart knowledge, to identify the learners' potentials by involving them in the teaching-learning process and motivating them towards active learning. Other duties of teachers, according to Malikow (2018), include; facilitating the teaching and learning process, keeping accurately, school and class records, maintaining and building discipline and values in pupils, serving as role models in the entire learning community, guiding and counseling learners and properly evaluating the learning outcomes.

For a teacher to effectively and efficiently carryout his/her function, he or she must possess defined qualities. The FRN (2004) stated that no education system can rise above the quality of its teachers. One of these qualities, according to Jasman (2018) is good knowledge of the subject matter or area of specialization. This, according to Jasman

implies that the teacher should be familiar with concepts to such a degree that he should be able to, without any doubt, transmit such to learners and be able to answer questions arising from the teaching-learning process. Snowdan (2018) asserts that an additional requirement for teachers in this regard is their ability to back their teaching with concrete illustrations, relevant examples and the ability to localize what seems foreign to the learners. Other qualities of a teacher abound. One of such qualities as outlined by Jasman, is the teacher's ability to have good knowledge of learners. This comprises knowledge of the biological, social, psychological and cognitive development of pupils, of issues related to group dynamics and interaction between learners as well as teachers and learners, learning difficulties and so on. He should also have good measure of teaching skills to be able to explore a variety of methods, strategies and techniques to produce the best result in the teaching-learning process.

Concept of Biology

Biology is one of the fields in the natural sciences that studies living things. The word 'Biology' is come from Greek words; Bios meaning life, and logy (logia) which means study (Ezemoka, 2017). Thus the concept of Biology is concerned with the study of life. In addition, Miller and Levine (2018) state that Biology is the study of life, structure, function, growth, origin, evolutions distributions, interrelationships, problems such as diseases, and adaptation of things and proposes solutions where possible. However Biology is the branch of science that studies life using inquiry methods and

discoveries. Abugu (2017) stated that Biology is natural science in which we study living organisms plants and animals. The knowledge of Biology helps in checking environmental degradation such as desertification, erosion, water hyacinth, land, air and water pollution. In the same vein, Bamidele (2018) defined Biology as a natural science with a broad scope but has several unifying themes that connect together as a single, coherent field. From the foregoing, it could be deduced that Biology is a field of natural science that is concerned with the study of all elements relevant to life. The areas within Biology include genetics, evolution, anatomy, physiology.

Importance of Biology in Nigerian Secondary School

The need for Biology education cannot be over emphasized. Due to the knowledge explosion all over the world via the internet, biological knowledge has also expanded (Nwagbo, 2018). Recent advances recorded in fields, such as: biochemistry, physiology, ecology, genetics and molecular biology have made the subject a central focus in most human activities including problems like food scarcity, pollution, population, radiation, disease, health, hygiene, family life, management and conservation of natural resources. In recent years, biotechnology has entered a new era with the advent of genetic engineering. The aim of this modern biotechnology when applied to agriculture is to enhance specifically the useful and desirable characteristics of crop plants and to eliminate the undesirable ones. It aims to improve crop quality and

productivity while at the same time reducing both mechanical and chemical input on the farms.

The knowledge of biology is applied in industries. For instance, biocatalyst is used to speed up a given reaction or a set of reactions. Biocatalyst has the potential of replacing or complementing chemical catalyst. It is also important in crime detection and this is called forensic science which is science in service of law. Research in biology has led to the production of genetically engineering human insulin for the treatment of patients suffering from diabetes mellitus. Research in biology has also led to the large scale production of human growth hormones, which has helped thousands of children who might otherwise have developed dwarfism. In genetics, biology has shed more light on a number' of issues bordering on human heredity. The findings now form the basis for genetic counseling. For instance, biology discourages marriage between people with inherited defects such as sickle cell anaemia (Chukwuneke, 2018).

Factors Promoting Students' Failure in Biology

Okoligwe (2018) outlined the causes of failure in Biology as follows:

Lack of Infrastructure and Learning Materials

Pleasant and conducive surroundings when provided give rise to pure thought, better concentration and understanding and enhance performance. Noisy overcrowded and busy home environment tend to affect the rate of concentration of Biology students and lower their academic performance. Existence of Library is another

influencing factor of academic performance. Library is the pivot of education enterprise. It is the platform for sharing of knowledge aimed at rejuvenating Nigerian schools through the provision of current books and journals, (FRN, 2016). It is the storehouse of resources and as such provides many more opportunities to the learner to acquire the knowledge, develop to achieve greater academic performance. It has been observed that there is a strong relationship between school library and academic performance. Okorie (2019) reports that schools with well- equipped library perform higher than those schools with poorly developed libraries. Good school services in library would help to promote knowledge acquisition by the Biology students.

Student Factor

Students perform poorly due to lack of adequate preparation, inability to understand question that demand a high level of thinking, flagrant breach of rubrics, thus answering more question than required due to poor command of Biology. Students often feel that Biology does not require continuous and serious attention like other subjects such as mathematics, physics and chemistry. They often put up a nonchalant/liaises-fair attitude towards the subject. Others believe it is an "A" subject. As a result, the students make little preparation before entering for Biology examination. They are rather more interested in whatever short cut that is available to obtain the certificate and go their ways.

Poor Study Habits

According to Udoh (2018) poor study habits are significant remote causes of examination malpractice in Nigeria and that by exposing the influence of poor study habits Biology students and education stakeholders could tame the rising tide of examination crime. The zeal of Biology students to study can be ignited by exposing them to continuous assessment procedure which would also enable them develop self-confidence and put less emphasis on certification. Anwar (2017) study investigated the degree of relationship between study habits and academic achievement of Biology students. The investigator has also sought to compare the influence of good and poor study habits on the academic performance of the Biology students. The descriptive analysis revealed positive relationship between academic achievement and study habits and the degree of relationship is high. It was also found that the academic performance of Biology students having good and poor study habits differ significantly and good study habits result in high academic achievement. The findings of this study would be of immense help in improving the study habits of the Biology students at secondary and senior secondary level. Improvement in student's academic achievement will further had to national development as competent manpower will be produced planning of specific items for study is highly recommended. Necessary study skills must be taught to our Biology students with a view to improving their academic performance.

Chaudhari (2019) found Study Habits of Higher School Biology students in Relation to their Academic Achievement. This study examined the usefulness of Imbibing in the Biology students study habit as a means of enhancing their academic performance. The study showed a high and academic performance. Furthermore, the difference in the study habits are attributed tothe facts that Biology students do not know how to study and those that manage to study do not adopt effective study methods. Chand (2013) studied on Study Habits of Biology students in relation to Type of School and Type of Family. The study was conducted on 200 secondary school Biology students to find out thestudy habits of the Biology students studying in government and private schools as well as Biology students belonging from nuclear and joint family. The finding revealed that there exists no significant difference between secondary school Biology students belonging to nuclear and joint family on different components of study habits and total study habits. Secondary school Biology students studying in government schools are significantly better on home environment and planning of work and planning of subjects than Biology students studying in private schools but private school Biology students are significantly better than government school Biology students on preparation for exam component of study habit. However, no significant difference exists between government and private secondary school Biology students on reading and note taking, concentration, habit and interest, school environment component of study habit and total study habit. Oluwatimilehin and Owoyele (2018) investigated the relationship between

study habitsand Biology students‟ academic achievement in core subjects at school. The aim was to determine the relationship between various aspects of study habits including Homework and Assignments, Time Allocation, Reading and note taking, Study period procedures, Concentration, Written Work, Examination and Teacher Consultation and Biology students‟ achievement in Biology, English language, Mathematics, Integrated Science and Art. Findings revealed that of all the study habits‟ subscales, „teacher consultation‟ was most influential while the „time allocation‟ exercise, concentration, note taking, reading and assignments were regarded as less integral to Biology students‟ academic performances. Therefore, regular counselling services to train Biology students on study skills strategies were advocated in order to boost their study habit and enhance their academic achievement. Jayanthi (2018) made research on study involvement of secondary Biology students in relation to academic performance in school subjects. The study intends to find out (i) the significant difference in the level of Study Involvement of Higher Secondary School Biology students with respect to certain variables and (ii) the nature of relationship existing between Study Involvement and Achievement in school subjects. The study reveals that the there exists a significant relationship between the study involvement of the Biology students and the achievementin English, which was really encouraging from the academic point of view.

Availability of Qualified Teachers

Studies on the qualified teacher and teacher experience on student learning have found a positive relationship between teachers' effectiveness and their years of experience, but the relationship observed is not always a significant or an entirely linear one (Klitgaard & Hall, 2019; Murnane & Phillips, 2018). The evidence currently available suggests that while inexperienced teachers are less effective than more senior teachers, the benefits of experience level off after a few years (Rivkin, Hanushek, & Kain, 2019). The relationship between teacher experience and student achievement is difficult to interpret because this variable is highly affected by market conditions and/or motivation of women teachers to work during the child-rearing period. Harris and Sass (2017) point to a selection bias that can affect the validity of conclusions concerning the effect of teachers' years of experience: if less effective teachers are more likely to leave the profession, this may give the mistaken appearance that experience raises teacher effectiveness. Selection bias could, however, work in the opposite direction if the more able teachers with better opportunities to earn are those teachers most likely to leave the profession. It is almost common to see teachers who specialize in other filed, for example communication etc, teaching Biology at the Senior Secondary level.

Unqualified and non-specialist teachers, recruited in our secondary schools to teach Biology is a major and serious impediment to effective teaching and learning. This has seriously hindered the subject as Adetola, (2018), states that the quality of education

falls because some teachers who are not qualified to teach a particular subject are recruited into our schools today. It is observed that one cannot give what he or she does not have. Those who understand the social and educational significance of a subject, teach with greater success than those who teach it because it appears on the syllables and timetable.

Method of Teaching

A method is a way of doing things. Gallilus, (2018), states that a teacher must assume the role of resource brokers. The implication of this is that teachers should become familiar with a variety of instructional delivery methods, rather than rely on one best way. The finding in this study run contrary to the above assertions as the Biology teachers in public secondary school depend heavily on the traditional method in Biology Lessons while the intensive use of prescribed textbook and the use of lecture method in delivery lessons are prevalent, the debate and group methods of teaching are occasionally used.

Overloaded Curriculum

The new Biology curriculum is planned using the spiral approach where concepts are arranged in such a way that they run throughout the three year post basic course, with the concepts being discussed in greater depth as the course progresses. The implementation of Biology programme has been a matter of serious concern to Biology educators. This concern arises from the fact that Biology occupies a central position in

the scientific and technological development of any Nation (Maduabum, 2019). The Biology curriculum just like any other science is activity oriented and student-centered. Therefore emphasis is laid more on teaching and learning of Biology as a process rather than as a body of knowledge.

However, studies like Nwachukwu and Nwosu (2017) found that science teachers are poorly trained in content and pedagogy. Some vital questions that need to be raised in construction of a curriculum to attain certain educational goals include what the educational objectives that the curriculum should achieve be and what should constitute the content of the subject matter as well as what should constitute the learning experiences in order to meet the objectives and make the curriculum relevant to the learner.

Negative Attitude of Teachers and Students towards Biology

Researcher have generally shown that teacher`s influence affect students` attitude towards subjects. It will be observed that the behaviour of most Biology teachers deviate from the expected normal behaviour of teachers. They tend to exhibit very "queenish" characteristics which scares students away from essay writing. Some Biology teachers create the impression to the students that Biology is difficult and not meant for everybody to study except for those with exceptional endowment like themselves who teach the subject. Some of them behave in such ways that the students may not like to imitate. They make people around them to be conscious of words coming out from their mouth

lest they make grammatical errors. They exhibit extreme neurotic behaviour either in the class or outside the classroom. Some see Biology teachers as bad people, those who over dress as in order to imitate the white men culture, they are seen as people who speak too much grammar their Biology teacher who are guilty of these accusations.

They seem to be unnecessary very fast while teaching and do not involve their students in regular classes. Some do not give adequate corrections to Biology assignment, others do not have the patience or time to work out problems in different ways or methods so that students can adapt to a convenient method, while others do not mark exercises or assignments given to students if they do, they are not marked in good time for students to correct their mistakes. It is a wellknown fact that modelling is a way of learning. If students do not like their teacher`s behaviours and consequently do not feel like modelling such behaviours they develop negative attitude to the teacher and his subject.

Sperling, (2018) buttressed the fact by indicating that the credibility of the communicator (that is the teacher) or changes in the attitude of another person is important. The teacher`s prestige is likely to influence whether or not students accept his communication or teaching. He pointed out to concomitant component of credibility: The first is the teacher`s expertness (for example, the teacher`s education, position or age) to increase students believe in him and the validity of what he say. The second is the

trustworthiness, for instance what does the students stand to gain if they alter their attitude as a result of what the teacher says?

Environmental Factor

A mounting widens for the potency of early environment is shaping letter cognitive abilities. It has been investigated largely through the studies of intellectual growth in twins reared in type by adoption and the efforts of parents' early deprivation of their children Bloom, (2019). In a related development, Ibrahim, (2017) stated that the home environment can be a handicap for a child in the school; in life or it may be a source of special advantages. According to him, poverty through malnutrition can exit influence on students' performance. Poor living condition can also influence the health of the child and directly or indirectly affect the ability to learn Biology. Many schools especially those in urban centers, are located in area where there is a busy movement and activities of many people. It was observed that many people use the school premises as short cut to their destination.

Review of Related Empirical Studies

A study by James (2018) examined the number of qualified teachers in Biologyand its relationship to student's academic performance in public secondary schools in a sample of Enugu East L.G.A of Enugu State. This descriptive study used a post-hoc dataset. An instrument titled "Quantity and Quality of Teachers and students Academic Performance" (QQTSAP) was used for the study. Twenty-one (21) public

secondary schools, one in each L.G.A from a population of Thirty-one (31) LGA in the State, were sampled. The senor secondary school certificate Examination result from 2000/01 to 2004/05 were used to analyze students academic performance and reflected some concern in the school system. The data were analyzed using ANOVA and spearman rank correlation coefficient to test the three operational hypothesis. Finding this study showed teachers qualifications, experience and teacher-student ratio were significantly related to student academic performance. These finding can be used to guide planner about the need for qualified teachers to facilitate effective teaching and learning in secondary Schools in Nigeria.

Amoo (2016) reported that there were wide gaps demand and supply of qualified teachers in Osun state. Shortage of qualified teachers as revealed by finding of this study was expressed as 44% in the 1978/80 session, 56% in the 1980/81 sessions and 51% in the 1981/82 sessions. He recommended that the state government ensure the finding of the State Colleges of Education so that they could train well-qualified teachers and address the problem of teacher shortage in her study on internal efficiency of Osun State public Secondary Schools from 1997/98 to 2002/2003, Akmsolu (2005) reported that Osun public Secondary Schools experienced wastage. She stressed further that out of every one Nigeria Naira (N 1) spent by the government, 45 kobo (N 0.45) was wastage in the period of the study as a result of high repetition, high failure and dropout rate in the system. In the organization of Economic Cooperation Development (OECD 2008) study

on school and quality, the authors reported that there are many factors that contribute to quality in education, such as students and backgrounds, staff and the ethos, curriculum and expectation with the school. As the literature described here suggests, teachers are a vital pre-requisite for student attainment of educational goals and objectives. These studies serves as a strong board for study, that investigated whether there is a relationship between the quality and quantity of teachers and students academic performance.

The study by Henry (2019) examined the effect of teachers qualification on the performance of senior Secondary student in physics. The purpose was to determine whether the status of the teachers has any impact on the performance of the students in physics. The survey type of descriptive research design was adopted. The sample for the study consist of 100 senior Secondary School. Physics students in Ekiti State and the teachers that prepared and presented the students in each school for 2009/2010 West African School Certificate Examination. The year's result summary for each school was collected with the bio-data of their respective physics teachers. Four hypothesis were postulated and tested at 0.05 significance level. The data collected were analyzed using inferential statistic. The result reveled that students taught by teachers with higher qualification performed better than those taught by teachers with lower qualification. It was also showed that students performed better in physics when taught by professional teachers. The result also showed that teacher's gender has no effect on their ability to impact knowledge on the students much as he/she is a skilled teacher in that field of study.

However, the experience of the teacher is significant at impacting the student's academic performance in physics. Based on the findings, it was recommended that experienced in higher level should teach physic at the certificate class.

Ogoda (2017) conducted a study on teachers' perception of instructional supervision in public primary schools in Benue State. The focus of the study was on all public primary School teachers in Zone C of Benue State. The researcher adopted descriptive survey design for the study. Four research questions and two hypotheses guided the study. The population of the study was 61,830 teachers in Zone C of the state. Out of this number, 240 teachers, four (4) from each school were sampled using stratified random sampling technique. A forty item questionnaire was constructed and used for data collection. Mean and standard deviation were used to answer the research questions and t-test statistics to analyze the stated hypotheses. The major finding of the study which affects the present study is that primary school teachers in Benue State perceive instructional supervision as inadequate and fault finding. It also showed that teachers do not appreciate different forms of supervisory activities carried out by supervisors in public primary schools in Benue state. Again, that while some supervisors carry out their supervisory activities often, others do not. The two studies are related in terms of their design, instrument and method of data analysis. The studies also relate because both are on perception of secondary school teachers. The gap between the two studies is however in the area of the study, population and sample of the study.

Okoh (2019) did a study on teachers' perception of the management of primary schools by Universal Basic Education Board (UBEB) in Niger State. Descriptive survey design was used for the research. Four research questions and one hypothesis were formulated. The study sampled 408 primary school teachers in Niger State public primary schools comprising 346 class teachers and 52 head teachers. The instrument for data collection was a structured questionnaire of 31 items. Mean and standard deviation were used to answer the research questions while t-test statistic was used to analyze the hypothesis. The results of the study indicated that supervision of schools is adequate, that the supervisory unit of SUBEB and head teachers, among others, supervise schools and monthly reports are submitted to SUBEB. The research is related to the present study in the area and design of the study and both are interested in teachers' perception.

In a related development, Fasasi (2011) carried out a study on teachers' perception of supervisory roles in primary schools in Osun State of Nigeria. The design of the study was the descriptive survey design. The study had no research questions but three hypotheses guided it. The population sample was 330 teachers selected using stratified simple random sampling technique. Questionnaire was used to collect data which was analyzed using t-test statistic. The main findings of the study were that both male and female teachers have similar perceptions of supervisory roles of primary school supervisors in Osun State. Also, that, teachers in rural and urban primary schools differ in their perception of supervisory roles. The above work is related to the present work in the

design and instrument. Both used descriptive survey design and also questionnaire as instrument for data collection and their interest point is primary school teachers' perception. However, there are differences in terms of population and sample. The reviewed work had no research question(s) but the present study has.

In another related study, Yildirim (2017), did a study on Student teachers' perception about their education supervisors' roles. The study was carried out in Necmettin Erbakan University, Turkey. The sample of the study was 239 students of the education faculty of the university. The study has neither research questions nor hypothesis. Methods of data collection and analysis were written interview and content analysis respectively.

Findings of the study showed that student teachers perceive their education supervisors as individuals who exhibit both positive and negative behaviors. Supervisors are described by student teachers as they perceive them. Such descriptions are that supervisors are frightening, ineffective, protecting and developing. The researcher also asserts that supervisors play outstanding roles in a healthy functioning of the education system and in determining whether or not the set goals have been achieved. The study relates to the present one in the sense that they both are interested in teachers' perception of supervisors' roles and so have some variables in common. Nonetheless, they vary in many areas such as the area and population of the study, methods of data collection and data analysis, and time or period of the study.

Summary of Reviewed Literature

The review of literature was presented under conceptual framework, and summary literature review. In the conceptual framework, the concept of laboratory in science teaching and learning was reviewed. Biology is one of the fields in the natural sciences that studies living things. The word 'Biology' is come from Greek words; Bios meaning life, and logy (logia) which means study (Ezemoka, 2017). Thus the concept of Biology is concerned with the study of life. Miller and Levine (2018) state that Biology in addition, is the study of life, structure, function, growth, origin, evolutions distributions, interrelationships, problems such as diseases, and adaptation of things and proposes solutions where possible. However Biology is the branch of science that studies life using inquiry methods and discoveries. Abugu (2017) stated that Biology is natural science in which we study living organisms plants and animals. The knowledge of Biology helps in checking environmental degradation such as desertification, erosion, water hyacinth, land, air and water pollution. In the same vein, Bamidele (2018) defined Biology as a natural science with a broad scope but has several unifying themes that connect together as a single, coherent field. From the foregoing, it could be deduced that Biology is a field of natural science that concerns the study of all elements relevant to life. The areas within Biology include genetics, evolution, anatomy, physiology.

The literature review was considered under the sub variable of independent variables. Each variable was discussed with empirical data. Teachers' characteristics and

academic performance of Biology students in secondary schools in Egor Local Government Area of Edo State. The results of all the relevant literature reviewedsuch as Teachers' qualification, Teachers' years of teaching experience and Teachers' attitude showed that, almost all the researchers came up with different report about the aforementioned variables. Although the majority of the research surrounding teacher experience and degree level and their impact on student achievement is inconclusive, there are trends to be considered. Much of the research regarding teacher experience indicates that teaching experience has a positive impact on student achievement, at least until year 5, when the impact levels off. Furthermore, some research indicates teacher impact on student achievement becomes negative in the later years of teaching (Darling-Hammond, 2018).

Although the research regarding the impact of teacher degree level on student achievement is inconclusive, the trend thus far shows that a teacher's degree level has no significant impact on student achievement unless the graduate degree is in the teacher's content area, and then only if the content area is math or science. Because obtaining a master's degree in other education fields has become popular, user-friendly, and monetarily rewarding, teachers tend to shy away from working on a master's degree in their content area. Instead, they opt for other degree options such as administration, curriculum and instruction, technology, or counseling. These degrees prepare a teacher for a job other than teaching in the classroom, which could be why the mere possession

of a master's degree does not necessarily equate to an effective teacher. While criteria such as experience and degree level are arguable in determining what makes a quality teacher, the importance of a quality teacher in a classroom is not arguable. No parent wants to put his/her child in a classroom with an ineffective teacher for even one year, much less multiple years, as many studies have found to be the case, especially in high-poverty and high-minority schools.

In summary, this chapter enumerated the depth and quality of literature on teachers' experience and students' academic performance are not as robust as that of teachers' qualification; however, the literature that exist on the relationship between teachers' experience and students' academic performance are much more consisted and positive in this relationship than are the findings on the relationship between teachers' attitude and students' achievements. In view of the review of the assertion postulation and findings of related literature from researchers, authors and scholars, it is believed that teachers' qualification, teachers' years of teaching experience and teachers' attitude on the area of teachers' characteristics are the key factors for students' academic achievement in Biology.

CHAPTER THREE

METHODOLOGY

This chapter entails the research methodology which the researcher adopted in deriving information for the study. It is discussed under following subheadings: Research Design

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

Research Design

The study adopted descriptive survey research method. This design was adopted because descriptive survey design studies are mainly concerned with describing events as they are without any manipulation of what is being observed. The goal of this research however is to find out the teachers' perception of the causes of failure of students in Biology in public secondary schools in Egor Local Government Area of Edo State.

Population of the Study

The population of this study consisted of all Biology teachers in the thirteen (13) public secondary schools in Egor Local Government Area of Edo State with a total

number of one hundred and five (105) Biology teachers (Source: Edo State Ministry of Education, Iyaro, May, 2024)

Sample and Sampling Techniques

The sample for the study was 30 Biology teachers. The purposive sampling technique was adopted by the study to select the entire thirty (30) Biology teachers from ten (10) randomly selected public secondary schools to make up the sample for the study. Purposive sampling technique was used to select five boys schools each from rural areas and urban area while four **(5)** mixed schools were selected from Oredo Local Government area of Edo state. A census of all Biology teachers in the schools selected was used for the study. The choice of the sampling technique was necessitated by the fact that schools with Biology laboratories and needed ICT facilities would yield best response for the study.

Research Instrument

A structured questionnaire titled: "Teachers' Perception on the Causes of Failure of Students in Biology Questionnaire" (POTBQ) will be used for data collection. The questionnaire was developed based on the study objectives and research questions and consisted of two sections (A and B). **Section A:** This section this section will be structured to elicit demographic information from the respondent such as age, gender, years of experience, and qualification. **Section B:** This section sought to elicits information on the teachers' perception of the causes of failure of students in Biology.

Respondent of each items will be 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, the researchers' supervisor and two experts in Department of Curriculum and Instructional Technology, University of Benin, Benin City. Their opinions, suggestions and recommendations of these experts will be used to produce the final instrument.

Method of Data Collection

The questionnaire w will be personally administered to all the respondents in the various schools after due permission was obtained from the principals. This will be done in collaboration with the help of the subject teachers in the school who assisted with the distribution and collection of the questionnaire.

Method of Data Analysis

The data collected will be analyzed using descriptive statistics of frequency, mean (x), and standard deviation (SD). Frequency, mean and standard deviation was used to answer the research questions.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

This chapter deals with presentation of results and discussion of findings. The results of the analysis are presented in the order of the research questions and hypothesis that guided the study. The research questions and hypothesis were answered under the following sub-headings:

- Answers to the Research Questions
- Data Analysis for Testing the Hypothesis
- Discussion of Findings

Table 1: Distribution of Respondents by Sex

Variable	Frequency	Percentage
Male	16	53.3
Female	14	46.6
Total	30	100.0

In table 1, 16 representing (53.3%) of the respondents were males while 14 representing 46.6% of the respondents were females. From the foregoing, it could be deduced that majority of the respondents were females.

Table 2: Distribution of Respondents by Years of Experience

Variable	Frequency	Percentage
Below 10 years	18	60
11 years and above	12	40
Total	30	100.0

In table 2, 18 representing (60%) of the respondents were below 10 years while 12 representing 40% of the respondents were from 11 years and above. From the

foregoing, it could be deduced that majority of the respondents were below 10 years of experience.

Table 3: Distribution of Respondents by Professional Qualification

Variable	Frequency	Percentage
B.ED	16	53.3
PGDE	4	13.3
M.ED	7	42.5
PH.D	3	10
Total	30	100.0

In table 3, 16 representing (53.3%) of the respondents were B.ED holders school. 4 (13.3%) of the respondents were PGDE holders while 7 representing 23.3% of the respondents were M.ED holders while 3 representing (10%) were HND holders. From the foregoing, it could be deduced that majority of the respondents were B.ed holders.

Answers to the Research Questions

Data collected for the research question was answered using mean and standard deviation. The result was shown in Table 4.

Research Question 1

What are teachers' perception on the causes of failure of biology students

Table 2: Mean and Standard Deviation Showing Teachers' Perception on the Causes of Failure of Biology Students

S/N	Item	N	Mean	SD	Remarks
1	The inadequacy of laboratories makes students express disinterest in the course of the lesson	50	2.92	.823	High Extent
2	The paucity of laboratory apparatus makes it difficult for students to comprehend properly what has been taught in class	50	2.52	.992	High Extent
3	The bulky nature of notes prepared by teachers makes it difficult for students to read and assimilate at their convenient time	50	2.54	.986	High Extent
4	The inability of teachers to organize field trip to expose student to the rudiments of Biology concepts makes it easy for students to fail	50	2.93	.787	High Extent
5	The shortage of qualified Biology teachers to arouse and solidify students interest in the course of the lesson makes it easy for students to fail	50	2.74	.934	high Extent
6.	Inadequate continuous assessment in Biology affect students' performance	50	2.57	0.09	High Extent
7.	Teachers rarely use laboratory in teaching Biology	50	2.67	.566	High extent
8.	The teachers tendency to demonstrate lackadaisical attitude in teaching Biology is a cause of mass students failure in the subject	50	2.56	.568	High extent
9.	The short period of time allocated to the teaching of Biology makes students fail the subject with ease	50	2.62		High extent
10.	Students reluctance in spending quality time to read what has been taught in class fosters failure in Biology	50	2.76		High extent
11.	The overcrowded nature of classroom used in teaching Biology makes it difficult for students to learn in class	50	2.56		High extent

12.	The paucity of Biology textbooks in libraries makes it easy for student to fail Biology	50	2.67	.544	High extent
13.	Some teachers do not know how to make use of instructional material and this causes poor performance	50	2.57	.531	High extent
14.	My school has library that is well equipped with relevant books and adequate space for reading	50	2.78		High extent
15.	The shortage of students exposure to laboratory apparatus on a frequent basis affect their academic performance	50	2.89		High extent
16.	Noise from outside the classroom often leads to loss of concentration during teaching	50	2.67		High extent
17.	Parents over work their children with domestic chores so they have little time for studies	50	2.89		High extent
18.	The classrooms in my school are overcrowded with more than 50 students in a class	50	2.78		High extent
19.	The tendency of parent not to guide their wards in doing their assignment at home makes students fail Biology with ease	50	2.67		High extent
20.	Parents provide materials such as text books for their children to read	50	2.89		High extent
	Cluster Mean				

Note: SD (Standard Deviation), N (Sample Size)

In response to research question one, Table 4 showed that the respondents rated item one and twenty as high extent with a mean of 2.92 and 2.93 while item two, three and five were rated as low extent with a mean of rating ranging from 2.14 to 2.44. The standard deviation also ranges from .787 to .992. The aggregate mean showed a mean of 3.19. With these results, the above mean score shows that school, teacher and student related factor influence students failure in Biology in public secondary schools in Egor Local Government Area to a high extent.

Data Analysis for Testing the Hypothesis

The data analysis for testing the hypothesis was carried out using two sample independent t-test. The results of the hypothesis is presented in Table 6.

Hypothesis 1

There is no significant difference between influence of strike action on the causes of student failure of male and female Biology teachers in public secondary schools in Egor Local Government Area

Table 6: The t-test analysis showing difference between male and female Biology teachers on the causes of students failure in Biology

Respondents	N	Mean	SD	df	t-value	p-value	Decision
Male	11	2.71	0.46				
				148	1.09	0.23	Not Significant
Female	19	2.62	0.50				

P-Value Significant at 0.05 level (2-tailed) (Retain Hypothesis) SD: Standard deviation
DF: Degree of freedom

The test of the hypothesis, as presented in Table 6 reveals mean responses of the significant difference between male and female Biology teachers on the causes of students' failure in Biology in public secondary schools in Egor Local Government Area. Male had a mean of 2.71 and female 2.62 while their corresponding standard deviations are 0.46 and 0.50. The t-value of 1.09, at degree of freedom of 148, which shows it was not significant at p-value of 0.23. Testing at an alpha value of .05, the null hypothesis was retained since the p-value is greater than alpha value. Thus, there is no significant difference between male and female Biology teachers on the causes of students' failure in

Biology in public secondary schools in Egor Local Government Area.

Discussion of Findings

This research question seeks to find out the effects of teacher qualification and experience on students' performance in SSCE Biology. From the findings, it can be seen that the respondents agreed that inadequate training and inexperience of the teachers affect the students' performance and, that to be effective; every English teacher must have a deep, sound and extensive knowledge of the subject matter in essay writing. The respondents agreed that no significant change in education can take place unless the teachers are well trained; and that only the teachers with necessary academic and professional qualification should teach Biology so as to perform effectively. This agreed with the work of Omelewa, (1977) which states that appropriate academic qualification and professional training are desirable for teachers of all subjects but particularly for teachers who not only have to teach their subjects effectively, but also have responsibilities of safe conduct of practical works; and work of Eze, (2010) states that "good knowledge of grammar is important for without it, it would be hardly impossible for anyone to write well"

Therefore, there is need to give the teaching of Biology professional flair. The teaching of Biology should no longer be left in the hands of those who were not adequately and appropriately trained. The respondents, all agreed that in the absent of an English teacher, any other teacher is usually called upon to teach the subject and that

most English teachers lack adequate knowledge because of the methods and conditions under which they were trained.

The study also sought to investigate the effects of the use of instructional materials on students' performance in Biology in Senior Secondary School. From items 7 and 10 the respondents agreed that teaching Biology without the use of instructional materials cause poor performance of students in school. This agrees with the work of Buffer and Wren (2019) when they asserted that, "A poorly prepared teacher can frustrate the effectiveness of any carefully organized curriculum but professionally prepared teachers can use even an inadequate structured curriculum to build an effective and efficient study''.

They agreed that lack of instructional materials in teaching and learning of Biology cause poor performance. This supports Davies, (2019) who stated that "instructional materials serve to help trainees and students learn more efficiently". Also, the use of instructional materials in teaching and learning situations arouses interest in the students and make them "physically present in the classroom and as a result, bring their senses into play. The respondents agreed that poor and inappropriate teaching method in teaching Biology cause poor performance.

However in the study seeks to determine the extent students' attitude towards Biology affect their performance. From items 11 and 12, the respondents agreed that most students stay away from classes which eventually affect their performance during

and after examination. And that the compulsory nature of Biology in Nigeria school, high level of indiscipline in schools, and large class size cause students poor performance. The respondents all agreed that students' slow interest in Biology causes poor performance.

Furthermore, the study sought to identify the causes of students' mass failure in Biology in Senior Secondary School. The respondents agreed on that the crowded nature of the classrooms cause students' poor performance; and that parents provide their children with textbooks and other materials for studying. However, the respondents strongly disagreed stating that noise from outside the classroom and lack of well stoked libraries has little or nothing to do with students' mass failure in Biology in Senior Secondary School.

The findings of hypothesis one revealed that there is no significant difference between male and female Biology teachers on the causes of students failure in Biology in public secondary schools in Egor Local Government Area.

This finding agrees with Areola (2019) who holds that the effect of laboratory activities of school in the difference in the acquisition of skill between male and female Physics students is not statistically significant. The finding also supports Ivowi (2019) who found out that laboratory activities action by polytechnics was not a significant factor in the acquisition of employability skills by male and female Physics students as male students expressed so much enthusiasm and doggedness in attending their lectures, executing their assignment and carrying out practical classes in Physics than their female

counterparts who expressed apathy and de-motivation in carrying out their academic discourse as a result of the shortage of laboratory apparatus embarked by polytechnics in Ondo State . The result of this study therefore contrasts with that of Njoku (2014), Nworgu (2015) and Isa (2015) as cited in Achor and Agbidye (2014) who revealed that there exist a difference in the acquisition of employability skills by Chemistry male and female students caused by dilapidated laboratories in higher education in polytechnics in Oyo State.

CHAPTER FIVE

DISCUSSION, SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

This chapter deals with the discussion of findings, summary, conclusions, recommendations, limitations of the study and suggestion for further studies.

Summary

The scope is designed to cover teacher's perception on the Causes of Failure of Students in Biology in Secondary Schools in Egor Local Government Area of Edo State. In order to guide the study, one research question and null hypothesis were formulated to guide the study. The study adopted descriptive survey research method. This design was adopted because descriptive survey design studies are mainly concerned with describing events as they are without any manipulation of what is being observed. The goal of this research however is to find out the teachers' perception on the causes of failure of students in Biology in public secondary schools in Egor Local Government Area of Edo State.

The population of this study consisted of all Biology teachers in the thirteen (13) public secondary schools in Egor Local Government Area of Edo State. The number of teachers for this study is made up of thirty (30). The sample for the study was 30 Biology teachers from ten (13) randomly selected public secondary schools. The purposive sampling technique was adopted by the study to select the entire thirty (30) Biology teachers to make up the sample for the study. A structured questionnaire titled:

"Teachers' Perception of the Causes of Failure of Students in Biology Questionnaire" (POTBQ) was used for data collection. The instrument was validated by three experts, the researchers' supervisor and two experts in Department of Curriculum and Instructional Technology, University of Benin, Benin City. Their opinions, suggestions and recommendations of these experts was used to produce the final instrument.

The questionnaire were personally administered to all the respondents in the various schools after due permission was obtained from the principals. This was done in collaboration with the help of the subject teachers in the school who assisted with the distribution and collection of the questionnaire. The data collected were analyzed using descriptive statistics of frequency, mean (x), and standard deviation (SD). Frequency, mean and standard deviation was used to answer the research questions.

Findings

The study made the following findings:

1. Inadequate training of teachers affects students' performance. And to be effective in teaching Biology, every Biology teacher must possess a deep, sound and extensive knowledge of the subject matter.
2. There are no adequate instructional materials for the teaching and learning of Biology and in most school the teachers do not make use of instructional materials at all probably because they are expensive and unconvincing; and as such they avoid teaching the tropics that require the use of instructional materials.

3. The students' attitudes toward Biology as a school subject affect their performance in the subject. Therefore, for effective and excellent performance in Biology, every student must develop and put maximum interest in learning Biology to avoid poor performance during examinations.
4. Parents do not demonstrate seriousness and interest in the academic discourse of their wards as they allocate time to guide them to execute their assignment because of their negative perception of Biology as a less prestigious subject.

Conclusions

Inadequate training of teachers affects students' performance. And to be effective in teaching Biology, every Biology teacher must possess a deep, sound and extensive knowledge of the subject matter. Also, it was found that there are no adequate instructional materials for the teaching and learning of Biology and in most school the teachers do not make use of instructional materials at all probably because they are expensive and unconvincing; and as such they avoid teaching the tropics that require the use of instructional materials. However, it was found that the students' attitudes toward Biology as a school subject affect their performance in the subject. Therefore, for effective and excellent performance in Biology, every student must develop and put maximum interest in learning Biology to avoid poor performance during examinations.

Recommendations:

Based on the conclusions, the following recommendations are made with the view of identification and remediation in the teaching and learning of Biology in Nigeria secondary schools.

i. The government should put into consideration professional training and qualifications of teachers during employment to ensure better outcomes during examinations. With this, only teachers with professional qualifications should be employed to teach Biology in our Secondary Schools.

ii. Government should encourage educational bodies to organize seminars, workshops and conferences for teachers. This can be done by providing subventions thereby enabling them to enrich such seminars, workshops and conferences.

iii. Government should provide and supply adequate instructional materials to schools both in Egor Local government Area and other schools within the country for effective teaching and learning of Biology.

iv. A policy should be made that would ensure the provision and utilization of instructional materials by the state.

v. The employment of more qualified English teachers in our Secondary Schools both in Egor and the country at large.

vi. The government should endeavor as part of the educational obligation help to build and functionally more classes at all levels of education for effective teaching and learning in our schools and for the attainment of the nation's educational objectives.

Suggestion for Further Studies

The following suggestions are hereby advised for further studies:

i. This research should be replicated in other secondary schools in and outside Edo State.

ii. A comparative study should be carried out in various parts of the country using Egor Local Government Area since a unified school system is in operation.

iii. A study should be carried out on "parental influence on wards in Escalation of examination misconduct on Biology in Nigeria.

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UNIVERSITY OF BENIN,

BENIN CITY, FACULTY OF EDUCATION

DEPARTMENT OF CURRICULUM AND INSTRUCTIONAL TECHNOLOGY

QUESTIONNAIRE

Dear Sir/Madam,

This research questionnaire is design to find out teachers' perception of causes of failure of students in Biology in public secondary schools in Egor Local Government Area of Edo State. The information supplied will be treated in confidence and this exercise is purely for research purpose. Please tick the appropriate answer to each question. Thank you

Section A: PERSONAL DATA

1. **Sex:** Male [ ] Female [ ]

PART B: KEYS: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, Strongly Disagree (SD) = 1

S/N	Items	SA	A	D	SD
A	**Teachers' perception on causes of failure of biology students**				
1	The inadequacy of laboratories makes students express disinterest in the course of the lesson				
2	The paucity of laboratory apparatus makes it difficult for students to comprehend properly what has been taught in class				
3	The bulky nature of notes prepared by teachers makes it difficult for students to read and assimilate at their convenient time				
4	The inability of teachers to organize field trip to expose student to the rudiments of Biology concepts makes it easy for students to fail				
5	The shortage of qualified Biology teachers to arouse and solidify students interest in the course of the lesson makes it easy for students to fail				
6	Inadequate continuous assessment in Biology affect students' performance				
7	Teachers rarely use laboratory in teaching Biology				
8	The teachers tendency to demonstrate lackadaisical attitude in teaching Biology is a cause of mass students failure in the subject				
9	The short period of time allocated to the teaching of Biology makes students fail the subject with ease				
10	Students reluctance in spending quality time to read what has been taught in class fosters failure in Biology				

B	Teachers' perception on causes of students' failure based on sex	SA	A	D	SD
11	The overcrowded nature of classroom used in teaching Biology makes it difficult for students to learn in class				
12	The paucity of Biology textbooks in libraries makes it easy for student to fail Biology				
13	Some teachers do not know how to make use of instructional material and this causes poor performance				
14	My school has library that is well equipped with relevant books and adequate space for reading				
15	The shortage of students exposure to laboratory apparatus on a frequent basis affect their academic performance				
16	Noise from outside the classroom often leads to loss of concentration during teaching				
17	Parents over work their children with domestic chores so they have little time for studies				
18	The classrooms in my school are overcrowded with more then 50 students in a class				
19	The tendency of parent not to guide their wards in doing their assignment at home makes students fail Biology with ease				
20	Parents provide materials such as text books for their children to read				