

**INFLUX OF UNQUALIFIED TEACHERS IN TEACHING  
BIOLOGY IN SECONDARY SCHOOLS IN SOKOTO  
METROPOLIS.**

**BY**

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### **APPROVAL PAGE**

This research project has been read critically and has been approved in partial fulfillment of the requirement for the award of Bachelor of Science degree in Education B. Sc. Ed Biology in the Faculty of Education and Extension Services, Usmanu Danfodiyo University, Sokoto.

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## **DEDICATION**

This research project is dedicated to Almighty God, to whom we belong, and to whom we shall return and to our beloved parents.

## **ACKNOWLEDGEMENT**

We sincerely appreciate and thank the almighty Allah for his mercies and tender kindness in all our academic endeavours. Without His grace and blessing this work will remain more of a dream. Our praises glory and adoration onto him.

Our sincere appreciation goes to our project supervisor in person of Mal. A. K. Tsafe for his guidance, attention, advice, encouragement, support and assistance toward the success of this project. May Almighty Allah bless you and reward you abundantly. Our parents Alh. Kaka Jibo Shinkafi, Alh. Muhammad Sadi, Hon. Abbas .I. Marafa and Alh. Muhammad Kangiwa who gave us the opportunity to see the “four walls” of the University and also made us realize that there is joy in reading, so we pray to Allah to add more grease to their elbows and bestow in them abundant blessing. They were indeed a role model to us and people whose footsteps we follow with keen interest. They assisted us not only morally, but financially and always spoke well for our success.

## **ABSTRACT**

This study aimed at investigating the influx of unqualified teachers in teaching Biology in secondary school in Sokoto metropolis. With the view of finding solutions to improve the situation at stake. Criteria used in selecting the schools were random selection technique in which five schools were selected from each of the two (2) local government areas of the Sokoto metropolis, namely (Sokoto North and Sokoto South respectively), as a sample for this research. Questionnaire was used as an instrument for the collection of data with three different questions for schools principals', teachers and students'. All together twenty (20) teachers, five (5) principals and two hundred and one (201) students were involved in the study. Analysis of the data collected revealed that; there is an acute shortage of professionally trained teachers and lack of adequate supply of equipment and teaching facilities hampers the teaching and learning of the subject. On the basis of the findings, it was recommended that; government should assist faculties and departments of education in the universities and colleges of education for the free - service, in-service and training of teachers for the benefit of the schools, also the student in the faculties and departments of education in the schools should be assisted by the government and encourage others to study education and also government should recruit professional trained educational graduate teachers and equal postings should be provided to schools in the urban and rural areas for the development of education in the state.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

The recent claim by the Universal Basic Education Commission (UBEC) that 80% percent of teachers employed in Sokoto state public schools lacked teaching qualification provided a further insight into the profound nature of the crisis commonly confronting our educational sector.

The aim of education is to provide knowledge that will integrate individuals and move them into more meaningful individuals in the society capable of solving their problems. Qualified teachers have been seen as an effective instrument towards achieving this effective teaching. It is pertinent to mention here that ineffective and poor teaching of biology as an important key science subject in the school curriculum has continue to cause some havoc by shattering the hope and aspiration of some students, especially the ambitious ones.

According to the National Policy on Education (2004) demands that, the minimum acceptable qualification for teaching should be the National Certificate of Education (NCE). Up from the previous minimum of teachers certificate (Grade II),

University graduates in disciplines other than education intending to make career out of teaching are required to obtain a Post-graduate Diploma in Education (PGDE).

The knowledge of biology as a science teaching subject taught in secondary schools require students to give the basic foundation and enquiry which enable them to know the science of their immediate environment in relation to plants, animals, agricultural activities, sanitation and ecology, as well as to pursue it as a career in the fields of teaching and health services. It is therefore against this background that this study is intended to look at how the influx of unqualified biology teachers contributed to the menace of preventing students to learn Biology as required of them by the system.

## **1.2 Statement of the Problem**

The major concerns of this study is to identify the problems of teaching biology as a science teaching subject in Sokoto state and get information on students attitudes in learning the subject. And also the teachers percentage of both professional and non-professional biology teachers.

For many years there has been concern about the problems faced by most of biology teachers in secondary schools. Such problems include, insufficient training, inadequate facilities, poor teaching techniques and inappropriate language of communications.

Biology as one of the core science subject, like many other subjects taught in secondary schools require a lot of skills for proficiency in teaching and learning process. The problems of teaching biology are not recent issues but have existed since the introduction of the subject in the school curriculum.

It is in view of this, the researchers therefore aimed at looking into the effects of unqualified teachers' influx in the teaching and learning of biology with regard to proficiency, achievement of students in the subject. The knowledge of these factors is very important for the educational development of Sokoto state. And at the end the researchers suggest possible solutions for effective teaching and learning of biology in secondary schools in Sokoto metropolis.

### **1.3 Objectives of the Study**

The study is generally to identify the influx of unqualified teachers in teaching biology in secondary schools in Sokoto metropolis.

The study specifically seeks:

- i. To find out the extent to which this influx of unqualified teachers affect students in learning biology.
- ii. To identify the factors that lead to the influx of these unqualified teachers in secondary schools in Sokoto metropolis.

- iii. To determine the percentage of both professional and non-professional biology teachers as a result of the influx.
- iv. To find out students' attitude towards learning biology as result of unqualified teachers' influx in the profession

#### **1.4 Research Questions**

The following are the research questions of the study:

- i. To what extent does the influx of unqualified teachers in teaching biology affect student academic performance?
- ii. What are the factors that led to the influx of unqualified Biology teachers in secondary schools?
- iii. What is the percentage of teachers as a result of the influx?
- iv. What is the attitude of student towards learning Biology as a result of unqualified teachers' influx in the profession?

#### **1.5 Research Hypotheses**

- Ho<sub>1</sub>: Influx of unqualified teachers in teaching Biology does not affect students' academic performance.
- Ho<sub>2</sub>: There are no factors that led to the influx of unqualified biology teachers in secondary schools.

Ho<sub>3</sub>: The percentage of teachers that are unqualified as a result of the influx in the professions is not significant.

Ho<sub>4</sub>: There is no change in the attitudes of students towards learning biology as result of influx of unqualified teachers.

## **1.6 Significance of the Study**

This study is expected to be of help to the biology teachers in improving teaching and learning in secondary schools. It is also hoped that it will motivate them to be more creative and more interested in Biology teaching. In addition, it is also hoped that this research will help school administrators and policy makers in Sokoto state in particular and federation at large to improve their services to the school if the recommendations given by the researchers are implemented.

Moreover, it will also help in understanding various problems affecting the teaching of biology so as to make necessary corrections as the future of our youths depends on the background provided to them and it is on this background that they are going to be developed.

## 1.7 Scope and Delimitation of the Study

This research project is delimited to secondary schools in Sokoto metropolis, Sokoto state of Nigeria. The study could not cover the entire state due to the time factor and financial constraints. Therefore, the research only covers five selected secondary schools in the state, namely:

- i. Sheikh Abubakar Gumi Memorial College, Sokoto.
- ii. Government Girls College, Sokoto.
- iii. Nagarta College, Sokoto.
- iv. Nana Girls Secondary School, Sokoto.
- v. ShehuShagari College of Education Secondary School, Sokoto.

## 1.8 Operational Definition of Terms

- ✓ **Universal Basic Education Commission** means committee responsible for co-ordinating and implementation of the programme (universal basic education) at the states and local Governments through the state universal basic education commission of each state and local Government education authorities, the commission was established on 7<sup>th</sup> Oct., 2004.

- ✓ **Unqualified Teachers** means teachers posting to schools lacking the proper, necessary or required qualification to handle teaching activities and other school responsibilities effectively.
- ✓ **Influx** means the arrival of a large number of peoples.
- ✓ **Teaching** means the act of disseminating and imparting of knowledge to learner.
- ✓ **Student** means someone who is enrolled or attends classes at a school, college or university.
- ✓ **Biology** means a natural science concerned with the study of living organism, divided into many species including their origin, evolution, taxonomy, physiology, morphology, anatomy, behavior, function, growth and their distribution.
- ✓ **National Policy of Education** means the national policies governing the business conducts of educational matters.
- ✓ **National Certificate on Education** means a certificate examination awarded to an individual who attends and passes the required skills, qualified to teach in both primary and secondary schools educational levels.
- ✓ **Teacher Certificate Grade II** means awarded certificate examination qualified an individual to teach at primary schools levels, it established in 1971 by the federal Government of Nigeria and alternated by national certificate on education (NCE) in 1998.

- ✓ **Post Graduate Diploma in Education** means an awarding certificate examination awarded by universities to graduates from disciplines other than education intending to make career out of teaching.

### **1.9 Basic Assumptions**

The researchers assume the following:

- i. There is inadequacy of qualified and well trained teachers in the secondary school in Sokoto state.
- ii. Influx of unqualified teachers causes deterioration in our educational sector.
- iii. The students taught by unqualified teachers are likely not to be expert in their educational carriers.



## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1 Introduction

The purpose of this chapter is to outline some of the problems of teaching biology in some selected secondary schools in Sokoto metropolis.

It traces the problem based on geographical locations of the state and Nigeria in general. Such issues like unqualified teachers' influx, shortage of qualified teachers and teachers and students attitudes.

This chapter also aims at reviewing some literatures on the influx of unqualified teachers in teaching biology in some secondary schools in Sokoto metropolis. Specifically, the chapter focuses on the following:

- ✓ Teaching biology in Nigerian secondary schools.
- ✓ Problems of teaching biology in Sokoto state secondary schools.
- ✓ Shortage of qualified teachers and inadequate teaching facilities.
- ✓ The effects of unqualified teachers' influx on the academic performances of the students.
- ✓ Teachers and students attitudes towards teaching and learning biology.
- ✓ Summary of the reviewed literature.

## **2.2 Teaching Biology in Nigerian Secondary Schools**

The teaching of biology starts from nursery schools, secondary and tertiary institutions. Biology is one of the core subjects and its deals with our natural environment and the other organisms living with them.

As teaching of biology in our secondary schools has been one of the task and responsibility given to teachers specialized in that field. The teachers posted to rural areas are more likely not to be functional and effective to their duties due to the un-conducive nature of the teaching and living environments.

According to the National Policy on Education (2004) noted that there is no country that would develop without the use of science and technology because it is considered as the backbone of national development. Biology as one of the core science subject taught in Nigerian secondary schools is still receiving a less than adequate attention in related to the activities of teaching and learning.

According to the National Teachers Institute (2015) observed that, the teachers recruited in secondary schools level are still less than adequate. I.e. the teachers' percentage is still very poor, but on the other hand, luckily too, the nation is witnessing a huge boost in the number of pupils attending schools, but unfortunately many biology teachers in the system are still not knowledgeable about the goals of teaching the subject.

According to Ukeje (1976) teaching is a conscious behaviour that makes learning more probable and more efficient and teachers are and will remain architect of all professions. This means that extra care should be taken in the recruitments and posting of teachers to our urban and rural secondary schools. There should be equal distribution of teachers in these areas for greater productivity.

The schools, biology teachers and biology students are faced with the problems which in turn affecting their teaching and learning the subject in Nigeria. Besides the global problems of inadequate motivation, funding and teaching materials, the country also lacks reliable data for policy making and for the planning of educational programmes.

Biology subject is offered to all senior secondary school science students as a compulsory requirement. The National Policy on Education stipulates that science should be taught at all levels of educational system (NERDC, 2004). Despite the effort made by the government in funding the Education sector over the years, still the teaching of biology in the country has some problems that hinders its progress. Inadequate teacher supply, lack of materials and equipment, students population in the class, laboratory management and poor assessment procedures.

Besides all these challenges in teaching the subject there is a mass failure of students in external examinations across the country which affects their future carriers and ambitions.

### **2.3 Problems of Teaching Biology in Sokoto State Secondary Schools.**

There are many problems affecting the teaching of biology in Sokoto state secondary schools and most of these problems are faced by the schools, teachers and the students which hinder the teaching and learning progress of the subject.

This provide a further insight into the survey carried out by Orode and Bashinka (2004), to determine the percentage of both qualified and unqualified science teachers in Sokoto metropolis which comprises Sokoto North and Sokoto South Local Governments respectively.

According to Bashinka (2004), survey has shown that, out of 847 teachers in Sokoto South Local Government just 74 or 8.7% are well trained science teachers.

Similarly, According to Orode (2004), reported that out of 365 teachers in Sokoto North Local Government of Sokoto state, only 20% representing 5.5% of teachers have a background in science subjects with biology teachers in inclusive and therefore qualified to teach the subject.

Teaching is an active involvement between the teacher and students, teaching have been defined by Wells, (1982) as cluster of activities that are noted about teachers such as explaining, deducing, questioning, motivating, taking attendance, keeping records of works, students' progress and student background information.

Most of the problems that teachers face are the lack of material resources, the issues of how to organize his class during practical class, most of the schools usually lack equipments and

when they are available they cannot go round due to the problems, the students perception and teachers motivation towards the learning of the subject is neglect. There is an inability of the biology teachers to improvise biology teaching materials when the standard ready-made ones are not available could be attributed to lack of adequate professional training on the part of She/he.

Effective teaching result in effective learning and as quiet expected, a negative rendering of this claim is also true. Defective teaching results in defective learning. Thus a good biology teacher is expected to possess good teaching quality, expertise, proper management ability and good interactive skills. The student learning style on their academic achievement in biology is not supposed to be neglected. So as to ascertain the competence of a biology teacher, one will need to look at all the competence of his students and their performance in biology examinations and ability to stand out or cope with advance area in their pursuits for further studies in biology or other field related to it. A prove into the factors militating against the effective teaching of biology is a right step in the right direction, since according to Nwanguma (2011) biology is the epicenter of all studies in life science. This defect the teaching of biology has been identified with the following factors which include lack of qualified and motivated biology teachers, non-use of proper teaching methods and techniques, lack of adequately equipped biology laboratories in schools, in-frequent and in-efficient biology practical classes and inadequate provision of infrastructural facilities in schools.

The goal of teaching the subject cannot be achieved when teaching biology in secondary school is defective, but the goal can be achieved when there is effective teaching of biology in secondary schools which will bring about the desired improvement in students learning outcome in biology.

According to the NTI (2015) in most part of Nigeria and Sokoto state in particular, despite the efforts made by the Government and educational stake holders before now there remain problems of shortage of qualified teachers which led to the recruitment of unqualified ones; and in fact, even in few part of the states where we tend to have enough teachers, most of them are unqualified, unskilled and lack professionalism.

#### **2.4 Shortage of Qualified Teachers and Inadequate Teaching Facilities.**

Recent studies have shown that there is an acute shortage of graduates' biology teachers in schools; therefore not enough biology graduates go into teaching. This cause the teaching of the subject to suffer relatively than the other subjects.

According to the National Literacy Survey (2010) estimated that among the North-Western parts of Nigerian states, Sokoto state recorded the least rate of 22.1% for the recruitment of qualified teachers to schools.

Therefore there is insufficient number of qualified biology teachers that will handle the teaching of the subject in the secondary schools. Not only to give the aim of the course but also a sense of direction.

It has been observed that, the use of teaching aids was neglected in teaching of biology in schools. Coombs (1999) writing on the problems facing education claimed that most acute shortage of qualified teachers and inadequate teaching facilities are noticeable. According to him, the two immediate causes are competitive disadvantages of education to the expansion of teachers training capacities and reluctant spending of funds to utilize the proper needed facilities by the government.

Most government pays more attention to the provision of equipment's to schools than they do in the training of qualified teachers and subsequent retention of such teachers. The effect is that the equipment will not be fully utilized because of the shortage and the lack of qualified teachers. Though equipment's are necessary, professional teachers can improvise teaching aid where none exist.

Similarly, According to Ukeje (1991) supports this view in one of his article titled "Quackery in the teaching profession". He said that there is a direct relationship between quality of teaching, adequate teaching facilities, personnel and quality of educational process. The defects in the quality of the present Nigerian educational systems partly resulted in poor teaching facilities and shortage of qualified teachers. One observe that when there is shortage of teaching

staff in schools, all grade of teachers are consequently recruited to fill in the gaps, the secondary schools in Sokoto educational zones are no exception to this practices.

## **2.5 Unqualified Teacher's Influx and its Impact on Academic Performance of the Students.**

The general claim about the falling standard of education may have stemmed partly from the lack of adequate teaching personnel which causes some havoc on the academic performance of students as they suffer been the victim of the effect. In support of this Ndu (1995) the maintenance of good standard of academic achievement depends upon adequate supply of trained teachers.

The negligence of the government in respects to the educational management, poor recruitment of staffs, also results in over labouring of the qualified teachers since most of them will be assigned to subjects outside their areas of specialization. All this invariably increases inefficiency with the poor academic performance in schools by students.

However, the West African Examination Council (2004) attributed poor performance by students in external examinations which is reported to be the consequence of the professional competence and technical knowledge of teachers.

Over the years, results of various examinations conducted by West African Examination Council (WAEC), National Examinations Council (NECO), Joint Admissions and Matriculation



Board (JAMB) in the country have not brought many cheers for the parents and students due to poor performance recorded across the board.

Records have shown that , the percentage of candidates that obtained grades 1-6 that is, (A-C6) in at least five subjects which includes (Biology, Chemistry, Physics, Mathematics and English Language ) in West African Senior School Certificate Examination (WASSCE) indicates that 27.53% in 2005, 15.56% in 2006, 25.54% in 2007, 13.76% in 2008, 25.99% in 2009 and about 20% in 2010.

Similarly, in 2014 despite the fact that there is progress, 72.6% of the students sat for science subject examinations on (NECO) and in biology 67.83% parts of the candidates that made credit grades.

It is therefore an established fact that the teachers are the central figure for the success of any educational instruction and upbringing of the child. In 1969 curriculum conference in its reports aptly described the teacher as “the key man in entire educational programmes”.

## **2.6 Teachers and Students Attitudes toward Teaching and Learning Biology.**

One of the functions of biology teachers is to serve as a facilitator and change agent in the teaching of secondary school biology subject. It is expected from him/her to be very familiar with the nature of biology and philosophy of science and education, reasoning on how to teach children generally and biology in particular. This, he/she would do through taking special note of

children with special needs, and as well ensuring equal opportunities for all children irrespective of gender differences. He/she is also expected to be familiar with the content of the curriculum in teaching process; this eventually affects teaching negatively since biology subject has a series of arrangements, which teachers must follow step by step because failure to any step leads to difficult understanding by the students. However, there is need for certain competence as secondary biology teachers which have not been well established. These include hard work, innovative, being research oriented and being honest etc.

According to the NTI (2003) observed that some teachers are having deficiencies which include, inability to meaningfully interpret the performance objectives, skipping unfamiliar content area in the curriculum, inability to recognize activities for students, skipping activities where materials are not readily available instead of improvising the teaching aids, lack of assessment skills, as a well as rushing the students to finish the scheme of work.

A lot of variables have contributed to the change and modification in attitudes of secondary school. Since there are inadequate or lack of basic amenities in the rural areas, teachers find it difficult to go there to teach and those who are there by compulsory or without alternative posting do so with mixed feelings, and as a result the quality of rural children education is adversely affected. It is established that poor teaching produces poorly educated children. The spatter distribution of amenities and infrastructure in those rural areas develop negative attitude towards teaching while school in the urban areas are overstaffed. The rural

inhabitants including the students would want know why teachers are having negative attitude to rural services.

Majority of the students had little exposure to science at the primary levels. Some are influenced by superstitions beliefs common to their different cultures. This may lead to many misconceptions about scientific issues. Another problem of children is that of the language. Some children find it difficult to comprehend what is being taught to them some are often shy even to ask questions in the classroom. Children learn quickly through the medium of mother tongue than through unfamiliar linguistic medium.

Sometimes students have interest in biology but their teachers do not develop their confidence in dealing with aspect of biological sciences, in terms of curiosity and methodological inquiry.

## **2.7 Summary of the Reviewed Literature**

The literatures reviewed by the researchers on this study summarized as follow:

With the available information reached in this study the “Influx of unqualified teachers in teaching biology in secondary schools in Sokoto metropolis”. The researchers observed that the unqualified teachers’ influx in the education system have been inexistence for a long-time on the national point of view.

The findings revealed that, Biology is one of the core-science subjects offered to all Nigerian senior secondary schools science students as stipulated by the National Policy on Education (NPE). The teaching of the subject in the schools across the country is followed by the curriculum delivered on teaching the subject.

The findings also revealed that there are many problems affecting the teaching of the subject, among the problems includes; acute shortage of professionally trained teachers, teachers incompetence in teaching the subject, lack of adequate teaching facilities, poor background of students in science and learning of biology in particular.

Also on the academic performance of the students the findings shows that there is recorded mass failure in the terminal and external examinations as a result of the problems militating the teaching and learning the subject in the schools.

The teachers and students attitudes on teaching and learning the subject, based on the findings it revealed that there is lack of motivation by the teachers to their students in learning the subject.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The methodology of the research as well as the procedure for collecting data is described in this chapter. It gives a description of the research design, research population, sampling procedure, instrumentation, procedures for data collection and analysis. Also the sub-headings discuss in it are validity of the instrument, pilot study and the reliability of the instrument.

#### **3.2 Research Design**

The design for this study is descriptive survey. It involves questionnaire serve to the respondents, analysis and interpretation of the data obtained.

#### **3.3 Population of the Study**

The population of this study comprises of principals, biology teachers, as well as student. Only five schools were selected to represent the whole secondary schools within Sokoto metropolis.

Table 3.1: showing the number of schools, science teachers as well as science students within Sokoto metropolis.

S/No	Local Gov't of Sokoto metropolis	Number of Schools	Number Science teachers	Number of Science student
1.	Sokoto North	7	70	1,330
2.	Sokoto South	15	120	3,570
	Total	22	190	4,900

Source: Sokoto state Ministry of Education, Department of Planning Research and Statistics (2015).

Table 3.2: Population of the study, showing the names of some selected secondary schools and their Biology teachers and Biology students respectively.

S/No	Selected Schools	Number of Biology teachers	Number of Biology students
1.	Government Day Secondary Schools, Arkilla.	4	94
2.	Women Centre for Continue Education, Sokoto.	2	80
3.	Sheik Abubakar Gummi Memorial College, Sokoto.	3	45
4.	Government Day Secondary Schools, Runjin Sambo.	5	98
5.	Sultan Bello Secondary School, Sokoto.	5	100
	Total	19	417

Source: Principals and Head of Departments offices (2015).

### 3.4 Sample and Sampling Techniques

Sample can be defined as representative part of the total population. The sample involves in this study includes five (5) principals, four (4) Biology teachers and two hundred and one (201) students from the five (5) selected senior secondary schools within Sokoto metropolis. This includes five (5) principals, twenty (20) Biology teachers and two hundred and one (201) Biology students making the total of 226 respondents. The sample was drawn using a random sampling method which is the method of selecting a sample from a population so that all members of the population have equal chance of being selected.

Table 3.3: Sample of the study, showing the name of some selected schools and the number of respondents, such as principals, Biology teachers as well as Biology students respectively.

S/No	Selected Schools	Principals responds	Number of respondents teachers	Number of respondent students
1.	Government Day Secondary Schools, Arkilla.	1	4	40
2.	Women Centre for Continue Education, Sokoto.	1	4	41
3.	Sheik AbubakarGummi Memorial College, Sokoto.	1	4	40
4.	Government Day Secondary School, RunjinSambo.	1	4	40
5.	Sultan Bello Secondary School, Sokoto.	1	4	40
	Total	5	20	201

Source: Researchers Group field work (2015).

### **3.5 Instrumentation**

Instrumentation refers to the process of selecting, adoption and utilization of an appropriate tool for data collection in a research work. The instrument used in this study is questionnaire. The researchers decided to use the questionnaire as an ideal instrument for this study, because it will help to identify the influx of unqualified teachers in teaching Biology in secondary schools in Sokoto metropolis.

This study was conducted during the third term of 2014/2015 academic year. The questionnaire was in three (3) parts; the first part centered on the principals, the second part was for the Biology teachers and the third part was for the Biology students.

#### **3.5.1 Validity of the Instrument**

The instrument was validated by the project supervisor who cross checked the questions there in and approve them as good enough to solicit information needed for the study. The instrument was again given to the researchers in which necessary corrections were again made, there by validating the instrument.

#### **3.5.2 Pilot Study**

A pilot study was conducted on a small scale portion of the population with three (3) secondary schools outside sample schools using the same instrument in order to test it reliability. The reliability index was found to be 0.72.



### **3.5.3 Reliability of the Instrument**

The reliability of any test is said to be concerned with the consistency of the measurement. A test-retest method was used to test the reliability of this study. Also Pearson moment correlation coefficient ( $r$ ) was adopted to determine the reliability coefficient of the instrument which gives 0.72. This indicates that the items were reliable within acceptable limit.

### **3.6 Procedure for Data Collection**

The questionnaires were administered personally by the researchers. Personal visits were made to all the sample schools used in this study in Sokoto metropolis. The questionnaire were distributed to the respondents and later retrieved from them on completion on the same day by the researchers. It took the researchers one day to go round the sampled schools.

### **3.7 Procedure for Data Analysis**

The statistical techniques used in analyzing the data are:

- i.** Frequency distribution.
- ii.** Percentage.

These techniques were employed for easy computation of result collected from respondents. After computation of the result, tabulation was made so as to get the final result.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

As earlier stated, the purpose of this study is to survey the influx of unqualified teachers in teaching biology in Sokoto state secondary schools with particular reference to Sokoto metropolis. Results of the study were analyzed as shown below.

#### 4.1 Analysis of Principals' Questionnaire

The principals of the selected secondary schools, including four (4) males and a female, all completed the questionnaire.

Item 2: Principals' Gender.

RESPONSE	FREQUENCY	PERCENTAGE (%)
Male	4	80
Female	1	20
Total	5	100

Source: Questionnaire Administered, 2015.

Item 3: Working Experience in Administration.

RESPONSE	FREQUENCY	PERCENTAGE (%)
1-4years	1	20
5-8years	2	40
9-13years	2	40
14-20years	0	0
Total	5	100

Source: Questionnaire Administered, 2015.

The five respondents principals all together have average years of working experience in job which is as follows; one of the respondents had 1-4years of working experience; two had 5-8years of working experience and the other two had a long time working experience in schools administration

Item 4: Working experience in teaching.

RESPONSE	FREQUENCY	PERCENTAGE (%)
0-5years	0	0
6-10years	0	0
7-15years	3	60
16-20years	2	40
Total	5	100

Source: Questionnaire Administered, 2015.

Based on the response of the principals 2(40%) of them disclosed that they have 16-20years working experience. While 3(60%) disclosed that they have 7-15years of working experience.

Item 5: Number of Biology Teachers in the Schools.

RESPONSE	FREQUENCY	PERCENTAGE (%)
1-2	1	20
3-4	2	40
5-6	2	40
Total	5	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 1(20%) principal has 1-2 number of biology teachers, 2(40%) principals have 3-4 number of biology teachers and also 2 (40%) principals have 4-6 number of biology teachers.

This indicates that there is shortage number of biology teachers compared to students' population in Sokoto metropolis.

Item 6: Whether each class has one Biology teacher in the school.

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	0	0
No	5	100
Total	5	100

Source: Questionnaire Administered, 2015.

100% said that they do not have for each class one biology teacher.

Item 7: Whether there is any teacher that teaches other subject beside biology

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	3	60
No	2	40
Total	5	100

Source: Questionnaire Administered, 2015.

From the response above, it shows that 2 (20%) of teachers are teaching other subject beside biology and 3(60%) are teaching biology only.

Item 8: Students' performance in biology

RESPONSE	FREQUENCY	PERCENTAGE (%)
Good	3	60
Fairly good	2	40
Poor	0	0
Total	5	100

Source: Questionnaire Administered, 2015.

From the response above, it shows that 2(40%) of principals said that students performance in biology is fairly good and 3(60%) of students are good in biology.

Item 9: Students' interest in biology

RESPONSE	FREQUENCY	PERCENTAGE (%)
Very much	2	40
Moderate	2	40
Partially	1	20
Total	5	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that one 1(20%) is of the opinion that students' interest in Biology is partial.

Item 10: Supervision visits paid by Ministry of Education to schools

RESPONSE	FREQUENCY	PERCENTAGE (%)
Very regular	3	60
Regular	2	40
Not regular	0	0
Total	5	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 2(40%) of the principals said that the visitation to the schools by Ministry of Education is regular while 3(60%) of the principals said that the visitation to the schools is very regular.

Lastly none of the principal reported not visiting by the Ministry of Education officials to the school.

Item 11: Satisfaction about the teachers in teaching biology

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	5	100
No	0	0
Total	5	100

Source: Questionnaire Administered, 2015.

100% said they are satisfied by the way teachers taught biology to students in their respective schools.

Item 12: Whether assist are provided to schools by any community on the part of teaching volunteering or donation of any teaching materials to teachers

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	3	60
No	2	40
Total	5	100

Source: Questionnaire Administered, 2015.

From the response above shows 3(60%) of the principals said they were assisted by community on the part of teaching and were given donation of some materials for teachers and



students while 20(40%) of the principals said they were not given any of such assistance and donation.

Item 13: Whether the school recorded highest performance in any external examination in biology.

RESPONSE	FREQUENCY	PERCENTAGE (%)
Never	1	20
Once	2	40
Twice	1	20
Many times	1	20
Total	5	100

Source: Questionnaire Administered, 2015.

From the response above, it shows that 1(20%) of the principals said they never recorded highest performance in any external examination in biology, 1(20%) of the principals said they had twice recorded it, while only 1(20%) said they have recorded it many times and 2(40%) have recorded it once.

Item 14 and 15: Comments and suggestions of the principals on factors responsible for the influx of unqualified teachers to schools and how to make better teaching of the subject.

They have contributed their different views, majority of the principals are of the view that government are recruiting teachers that are not professionally trained and therefore, government should increase the number of professional teachers' and training of teachers' to advance their knowledge to reduced teachers' work load in term of students' teachers' ratio and also teachers' welfare should be looked into with a view to motivate them to teach effectively.

#### **4.2 Analysis of Teachers' Questionnaires**

In the five schools there were twenty (20) biology teachers and all of them have completed the questionnaires given to them and retrieved it to researchers on time. There were twelve (12) male teachers and eight (8) female teachers.

Item 2: Teachers' Gender.

RESPONSE	FREQUENCY	PERCENTAGE (%)
Male	12	60
Female	8	40
Total	20	100

Source: Questionnaire Administered, 2015.

The above table shows the total number of teachers and their gender differences. Out of twenty biology teachers whose views were taken, 12 (60%) are males while 8 (40%) are females.

Item 3: Teachers' Qualification.

RESPONSE	FREQUENCY	PERCENTAGE (%)
N C E	8	40
H N D	-	-
B. Sc	7	35
B.Sc. Ed	5	25
Total	20	100

Source: Questionnaire Administered, 2015.

From the data obtained 35% of the teachers are not professionally trained while 40% of the teachers are N C E holders and 25% B.Sc. Ed. This indicates that most of them that are teaching biology subject in secondary schools are not professionally trained and those with N C E are only trained to teach in the primary schools and junior secondary schools.

#### Item 4: Teachers' Teaching Experience

RESPONSE	FREQUENCY	PERCENTAGE (%)
1-5years	6	30
6-19years	8	40
10-14years	6	30
15-20years	0	0
Total	20	100

Source: Questionnaire Administered, 2015.

Item 5: Number of periods that each biology teacher has per week, the response shows that 15 (70%) of the teachers have 6 periods per week while 5 (30%) of the teachers have less than 4 periods per week.

#### Item 6: Whether the teachers are teaching biology only

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	12	60
No	8	40
Total	20	100

Source: Questionnaire Administered, 2015.

From the response above, it shows that 12 (60%) of the teachers are teaching biology while 8 (40%) of biology teachers are teaching other subjects beside biology in the schools.

Item 7: How many forms of classes does a teacher given to teach

RESPONSE	FREQUENCY	PERCENTAGE (%)
1-2	5	25
3-4	5	25
5-6	10	50
Total	20	100

Source: Questionnaire Administered, 2015.

From the response above, it shows that 5 (25%) of teachers teaching more than one (1) class, again 5 (25%) of teachers teaching more than three (3) classes and 10 (50%) of teachers are teaching only biology subject. This has indicated that there is moderate number of biology teachers in the schools.

Item 8: How many laboratories are in the school?

RESPONSE	FERQUENCY	PERCENTAGE (%)
1	0	0
2	0	0
3	8	40
4	12	60
Total	20	100

Source: Questionnaire Administered, 2015.

Item 9: Whether there is separate biology laboratory in the school

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	14	70
No	6	30
Total	20	100

Source: Questionnaire Administered, 2015.

From the response above shows that 14 (70%) of schools have separate biology laboratory and 6 (30%) are sharing the laboratory with the other science subjects.

Item 10: Whether there are enough teaching materials

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	5	25
No	15	75
Total	20	100

Source: Questionnaire Administered, 2015.

The response above shows that 15 (75%) of biology teachers do not have enough teaching materials and 5 (25%) said that they have enough teaching materials.

Item 11: How often does a teacher use teaching materials

RESPONSE	FREQUENCY	PERCENTAGE (%)
Always	-	0
Weekly	6	30
Monthly	14	70
Total	20	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 6(30%) of teachers use teaching materials on weekly basis, 14(70%) of teachers use teaching materials on monthly basis while none of the teacher use teaching materials always.

This indicates that there is shortage of instructional materials in the schools.

Item 13: Type of teaching method use by the teacher in the class

RESPONSES	FREQUENCY	PERCENTAGE (%)
Discovery method	2	10
Demonstration method	7	35
Discussion method	11	55
Total	20	100

Source: Questionnaire Administered, 2015.

From the above responses 7(35%) agreed that, they often use demonstration method; 11(55%) disclosed that they often use discussion method while 2(10%) disclosed that they often use discovery method.

This indicates that, due to the shortage of teachers in the schools the work load of some teachers is too much for any to deal with the teachers' technique of teaching methods often in use and how they follow up their teaching with practical. The high percentage of follow up is really encouraging as modern science programme seem to emphasis biology as a body of scientific knowledge and a way of doing.

Item 14: How frequently do the teachers attend seminars, workshops on science subject in a year



RESPONSES	FREQUENCY	PERCENTAGE (%)
Yes	9	45
No	11	55
Total	20	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 11(55%) admitted that they did not often attend seminars, workshops and 9(45%) claimed that they did often attend seminars and workshops.

Item 15: Problems that teachers faces on the teaching of biology in schools.

The majority of their responses complained on the shortage of the working colleagues (teachers), teaching materials, and poor performance of students in internal and external examinations among others.

### 4.3 Analysis of the Students' Questionnaires

#### Item 3: Students' class

RESPONSE	FREQUENCY	PERCENTAGE (%)
SS 1	100	49.76
SS2	101	50.24
SS 3	0	0
Total	100	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 100(49.76%) of students are from SSI classes while 101(50.24%) of students are from SSII classes.

#### Item 4: Students' Gender

RESPONSE	FREQUENCY	PERCENTAGE (%)
Male	150	74.63
Female	51	25.37
Total	201	100

Source; Questionnaire Administered, 2015.

From the responses above, it shows that 150(74.63%) of students are males while 51(25.37%) of students are females.

Item 5: Students' Age

RESPONSE	FREQUENCY	PERCENTAGE (%)
16-17years	65	32.34
18-19years	46	22.86
20-21	54	26.87
22-23	36	17.93
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that students with 16-17years of age group have the highest population percentage of 65(32.34%), those with 18-19years of age are 46(26.86%), and students with 20-21years of age are 54 (26.87%) and those with 22-23years of age are the highest age group with least population percentage of 36(17.93%).

Item 6: Interest of the student based on their teachers teaching method

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	116	57.71
No	85	42.29
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 116(57.71%) of students have an interest on their teachers teaching method while 85(42.29%) of students have no interest on their teachers teaching method.

Item 7: Instructional materials used by their teachers

RESPONSE	FREQUENCY	PERCENTAGE (%)
Always	40	19.90
Weekly	91	45.28
Monthly	70	34.82
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 40(19.90%) of students disclosed that their teachers use teaching materials at daily basis, 91(45.28%) of students disclosed that their

teachers uses teaching materials on weekly basis while 70(34.82%) of students disclosed that their teachers uses teaching materials on monthly basis only.

Item 8:Nature of student understandingof their teachers

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	170	84.58
No	31	15.42
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 170(84.58%) of students are understand their teachers when they are teaching them in the class while 31(15.42%) of students are not understanding their teachers when teaching them in the class.

Item 9: Whether their teachers encourages them to ask question

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	169	84.08
No	32	15.92
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 169(84.08%) of students disclosed that their teachers are encouraging them to ask questions in the class while 32(15.92%) of students disclosed that their teachers are not encouraging them to ask questions in the class.

Item 10: Whether they ever gone for an excursion

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	90	44.78
No	111	55.22
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 90(44.78%) of students have went for an excursion while 111(55.22%) of students have never went for an excursion.

Item 11: Whether is the biology the subject they like the most

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	126	62.69
No	75	37.31
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 126(62.69%) of students h disclosed that is the subject they like most while 75(37.31%) of students disclosed that they prepared other subjects than Biology.

Item 12:Satisfaction about the way their teachers are teaching them

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	103	51.24
No	98	48.76
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 103(51.24%) of students have satisfied with the way their teachers taught them in the class while 98(48.76%) of students disclosed that they are not satisfied with the way their teachers taught them in the class.

Item 13: Teachers behaviour in the class

RESPONSE	FREQUENCY	PERCENTAGE (%)
Polite	60	29.86
Moderate	50	24.87
Harshly	35	17.41
Friendly	56	27.86
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 60(29.86%) of students disclosed that their teachers behaves politely in the class, 50(24.87%) of students disclosed that their teachers behaves moderately in the class, 35(17.41%) of students disclosed that their teachers behaves harshly in the class while 56(27.86%) of students disclosed that their teachers behaves friendly in the class.



Item 14: Whether they are comfortable enough when their teachers come into the class

RESPONSE	FREQUENCY	PERCENTAGE (%)
Yes	126	62.69
No	75	37.31
Total	201	100

Source: Questionnaire Administered, 2015.

From the responses above, it shows that 126(62.69%) of students disclosed that they are comfortable enough when their teachers comes into their class while 75(37.31%) of students disclosed that they are not comfortable enough when their teachers comes into their class.

Item 15: Suggestion on how to make the teaching of biology interesting to them.

Majority of their responses disclosed that, the teachers should behave politely and friendly in the class; they should also let them ask questions and responds to answers their questions some of them commented that teachers should make better use of teaching materials and use a concise teaching method, giving them homework assignment after the lesson.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The purpose of this research was to find out the problems of the influx of unqualified teachers in teaching biology in some selected secondary school in Sokoto metropolis. The scope of the research was restricted to only five selected secondary schools consisting of boys and girls.

The significance of the research was to help the teachers, principal and government to solve problem of teaching biology subject.

#### **5.2 Summary of the Major findings**

The findings of this study are presented as follows:

##### **I. Academic qualification and experiences of secondary school teachers.**

From the data obtained 35% of the teachers are not professionally trained while 65% of teachers are professionally trained and out of this professional teachers 40% are N.C.E holders and 25% are B.Sc. Ed holders. This indicate that most of them that are teaching biology in secondary schools are not professionally trained and those with NCE are only trained to teach in primary schools and junior secondary schools. Bearing this fact, and figures in mind one can clearly see many of our teachers are not professionally trained.

Indeed qualified teachers are needed to handle all schools subjects particularly biology subject and must be adequate base on the above findings, there is need to increase the quality of biology teachers in the secondary school as stated in the national policy on education (1977:10). “Teachers education will continue to be given a major emphasis in all our educational planning because; no education system can rise above the quality of its teachers”.

In the light of this statement of commitment, the policy stipulates that all teachers in our educational institutions must be professionally trained educationist. Coombs, (1999) writing on the problem facing education from global point of view, identify shortage of teachers as one of the problem confronting educational development.

Similarly Ukeje(1991) speaking on the problem facing education from the global point of view, stresses that for the literacy, innumeracy, the possession of skills, the requisition of knowledge or even schooling rather it implies the all-round development of individuals. Thus, a teacher should be trained to achieve all this in a time. Moreover, he emphasizes that teachers should be trained in the diagnoses in the various personality trait and how to utilize them positively in class room.

## **II. Shortage of qualified teachers and inadequate teaching facilities.**

As it was revealed that there is an acute shortage of biology teachers in schools therefore not enough biology graduates go into teaching. This has caused the teaching of the subject to suffer relatively than the other subject.

In support of the above statement and from the data obtained 12(60%) out of 20 selected teachers from five (5) schools disclose that they are teaching biology only while 8(40%) rest of the teachers disclose that they are teaching other subject beside biology in the schools.

Similarly from the data obtained on how many forms of class doe a teacher teach. The response shows that 5(25%) of biology teachers teaching more than one class, again 5(25%) of teachers teaching more than three classes and 10(50%) of teachers are teaching only biology subject. This indicates that there is moderate or short number of biology teachers in the schools. For any education system to stand the test of time, it must have a good number of well qualified teachers to cater for the welfare of the urban or in the rural areas. This is because these young secondary school students are the raw materials the society must invest in our man power development. The qualified teachers hold the key to modernization so there is the need for uniformity in distribution of qualified teachers in our schools.

Similarly, Coomb (1999) claim that the most acute shortage of well qualified teachers are noticeable in science according to him, the two immediate cause of the shortage are: comparative disadvantage of education and the general lack in the expansion of teachers training capacity.

The researchers therefore agreed with Igwe (1982) that a situation where schools lack qualified teachers will result into over –burdening of the few qualified ones.

Similarly the findings made on the issue of teaching facilities as this confirm the previous findings made by Okpala (2000), noticing this idea mentioned “ that the use of teaching materials in facilitating and improving teaching and learning process was not receiving the adequate attention it deserved in Nigeria secondary schools and colleges. The negligence of teaching materials was also acclaimed by Babs (1976) who said that:

*“the African man of today is like a farmer who cultivated his farms sometimes with bear hands, sometimes with antiquated hoe or any other crude instrument that is available. He sometimes succeeds and often fails, not because he can only practice what he knows and uses the materials available to him“*

According to him, if teaching aid were wrongly or intelligently used, confusion and superficiality or inertia in the class will result.

Claimed by Clay (2000) who said that the absence of teaching aids would hinder the learning process of Biology as children would not understand the lesson thoroughly.

The utilization however is subjected to the following: availability of instruction materials from the (federal and state), improvisation due to lack of it by the biology teachers, making funds available for teachers to buy some equipment. Improvisation has important impact on the availability of the teaching aids. The factors that affect utilization of teaching facilities can be subjected to the following:

- i. Inadequate professionals
- ii. Non-availability of serving repair centers
- iii. Lack of trained assistance

Improvisation is a way of substituting, replacing or supplementing standard materials with locally available materials or resources. In biology subject teaching, improvisation refers to the act of using alternative materials and resources to facilitate instructions, whenever there is lack or shortage of some specific first hand equipment. It is therefore desirable that teachers should endeavor to improve the quality of their teaching through improvisation especially as to make learning a more pleasurable and effective.

### **III. Number of period per teacher and distribution of periods per week.**

Based on the findings only 70% of teachers have 6 period per week while 30% of teachers have less than 4 period per week and this indicate that, most of the teachers are very loaded, so that they will have enough time to carry out their activities sure as research, design lesson plan and also have a leisure for themselves, this help them to be punctual in carrying out their duties. To solve problems government should recruit more qualified teachers.

### **IV. The method used by the teachers when teaching biology subject.**

From data obtained, it shows that 30% of biology teachers agreed that, they often use the demonstration method, 55% disclose that they often use disclosure method while 10% disclose that they often use discovery method.

This indicate that due to the shortage of teachers in the school the work load of some teachers is too much for any to deal with the teachers techniques of teaching methods often in use and how they follow up their teaching with practical.

Similarly, it revealed that different methods are used by different teachers that suit the topic of discussion.

Ndu (1995) suggested that the practical in any learning experience should involve student activities such as observing, counting, measuring experimenting, recording observation and carryout field work. They further stated ‘that student in biology cause maybe thought how to seek explanation. Presumably learning, this skill will also in valued guide practice.

### **5.3 Limitation of the Study**

This research has been carried out to the best knowledge and ability of the researchers in respective of under listed limitations.

The problem of finance especially this period harsh economic condition constituted a great handicap to a study of this nature. The study also involves travelling to schools distribution and collection of questionnaires and other vital data for the work.

However the researchers are students who still have other academic engagement as well as the research work is another limitation of this study. All this constitute a great problem to the researchers.



## **5.4 Conclusion**

This study was carried out to determine the influx of unqualified teachers in teaching biology in secondary school in Sokoto metropolis. The result of the study has lead to the following conclusion.

Professionally qualified, conscientious or dedicated teachers are very essential in the achievement of the national goals and objectives of education. Adequate number of this category of teachers should therefore very be posted to the urban and rural secondary school alike. This done will make for effective teaching in both areas, which in turn result in better academic performance.

The quality and strength of any educational system derived from strength of character of its teachers. It is the teacher who impacts the knowledge and the skill to the students. Considering therefore the paramount rule of the teacher in the educational process any positive attempt aimed at maintaining but also raising the standard and quality of education must beginning with the improvement of the quality of the teachers in other to ensure effective teaching and proper learning.

It was revealed from the response of some biology teachers that, the discussion, discovery and demonstration method of teachers were the most often method use by the biology teachers and where occasionally complimented with other methods like inquiry

and discussion. The number of periods allocated for teaching biology subject was seen as adequate by most of the teachers.

In conclusion therefore, the teachers must not only well qualified but also developed in adequate number in our urban and the rural secondary schools.

### **5.5 Suggestions for further study**

The study is limited to some selected schools within Sokoto metropolis, Sokoto state. It can also be carried out in other states in Nigeria.

However, there is need for further research on the following:

- i. The effect of shortage of qualified teachers in teaching biology.
- ii. Since Biology is a science of life, it should be offered in all secondary schools, not just as a requirement and pre-requisite for further science study but as means of helping individual understanding of this sense as well as manipulative skills development.
- iii. Furthermore the relationship between the students attitudes towards Biology and their performance in the subject, attitudes of both state and local government, attitude of Biology teachers as well as the attitude of the students in their local government areas for comparison and attitude of students in Urban and Rural secondary schools of the state should be carried out by the future researchers.

## **5.6 Recommendations**

On the basis of the problems observed in the course of this study, the following recommendations are hereby put forward for further studies.

- I. Government should improve the service condition of teachers in order to check the exodus of teachers from teaching profession. This method will otherwise enhance the teaching standards.
- II. Posting of teachers should be done equitably for this will make those schools in rural areas to rejoice with their counterpart in the urban.
- III. Also, teachers should assign to teach only their areas of specialization.
- IV. Government should provide more training facilities for teachers in our institution of higher learning so as to produce adequate number of qualified teachers for our secondary schools.
- V. In order to correct the imbalance arising from having more qualified teachers in some subject areas, additional trained teachers should be trained for the deficiency subject areas. Social amenities comparable to those obtain in the urban areas should be provided in rural areas in order to accept posting to rural secondary school. Again government should make acceptance to posting mandatory on all teachers as much as possible.

- VI. To ensure effective teaching and proper learning, adequate number of qualified teachers should be posted to all schools. Teachers posting should take cognizance of qualified teachers' area of specialization. Acceptance to posting should be mandatory on all teachers.
- VII. Government should provide special allowance to the student reading science education in the college of education and university so as to increase the number of science teachers.
- VIII. The teaching and learning biology subject should start earlier than the present system in which student start in senior secondary one (SSI) and more emphasis should be lead in the propagation of the course in the new integrated science course.
- IX. As much as possible biology teachers should not have fifteen to eighteen periods per weeks
- X. The ministry of education should provide each school with professional counselors, for the purpose of guiding students in vocational right.
- XI. Each biology subject class should not contain more than 35 students at a time in other to achieve an effective control in a teaching and learning situation

- XII. The principal, vice principal and head of department of biology should endeavor to check the to work, student note book and practical books; the teachers lesson note and correlate with syllabus at least twice in a month, to assess the efficiency of the teachers
- XIII. The ministry of education should select qualified biology teachers in the state to review all biology textbooks
- XIV. The government should encourage indigenous books-writers and make them produce teachers guide for their books
- XV. Funds for repairing damage equipment and facilities should provide facilities to each school.
- XVI. Teachers should be encourage to improvise facilities that are not available in the school
- XVII. Finally, enabling law or decree should be passed by the government stipulating minimum requirement that should qualify a person to become a member of teaching profession as it obtains in professional association like Nigeria Bar Association (NBA), Nigeria Medical Association (NMA), Council of Registered Engineers of Nigeria (COREN) etc.

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10. How often is your school supervised by Ministry of Education? (a) Very regular [ ] (b) Regular [ ] (c) Not regular [ ]
11. Are you satisfied with the way your teachers taught biology to students during classes?  
 (a) Yes [ ] (b) No [ ]
12. Is your school assisted by any community on the part of teaching volunteering or provided with any scientific/learning materials to your teachers?  
 (a) Yes [ ] (b) No [ ]
13. Did your school record the highest performance in any external examinations in biology?  
 (a) Never [ ] (b) Once [ ] (c) Twice [ ]  
 ] (d) Many times [ ]
14. In your opinion what factors did you think are responsible for the influx of unqualified teachers in your school?

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15. What you will suggests for the better teaching of the subject as the influx of unqualified teachers treating schools?

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**USMANU DANFODIYO UNIVERSITY, SOKOTO**  
**FACULTY OF EDUCATION AND EXTENSION SERVICES**  
**DEPARTMENT OF SCIENCE AND VOCATIONAL EDUCATION**  
**TEACHER'S QUESTIONNAIRE**  
**INFLUX OF UNQUALIFIED TEACHERS IN TEACHING BIOLOGY IN**  
**SECONDARY SCHOOLS IN SOKOTO METROPOLIS.**

Dear Sir/Madam

We are undertaking a research project on the above subject matter, we hope you will kindly give us your usual cooperation by supplying us with the information required and you can help by answering the following questions carefully and honestly; you are expected to tick the answer you strongly agree.

**QUESTIONS:**

1. Name of school/college \_\_\_\_\_
2. Sex                      Male [  ]                                      Female [  ]
3. Qualification of the teacher.  
(a) NCE [  ]                      (b) HND [  ]    (c) B.Sc. [  ]    (d) B.Sc. Ed [  ]
4. Teaching experience.  
(a) 0-5years [  ]                      (b) 6-10years [  ]                                      (c) 7-15years [  ]                                      (d) 16-20years [  ]
5. How many periods do you have per week?  
(a) 1 [  ]                      (b) 2 [  ]                                      (c) 3 [  ]                                      (d) 4 [  ]
6. Is biology the only subject you are teaching in this school?  
(a) Yes [  ]  
(b) No [  ]
7. As senior secondary school biology teacher, how many forms of classes are you teaching?  
(a) One [  ]                      (b) Two [  ]                                      (c) Three [  ]
8. How many laboratories are in the school?  
(a) 0 [  ]                                      (b) 2 [  ]  
(c) 3 [  ]                      (d) 4 [  ]
9. Do you have separate biology laboratory in your school?  
(a) Yes [  ]                                      (b) No [  ]
10. Do you have enough materials for teaching Biology?  
(a) Yes [  ]                                      (b) No [  ]

11. How often do you use teaching materials like pictures, charts and models etc? (a)  
always [ ] (b) weekly [ ] (c) monthly [ ]
12. Do your students have interest in Biology?  
(a) Yes [ ] (b) No [ ]
13. What method are you using in teaching your students? (a) Discovery method [ ]  
(b) Demonstration [ ] (c) Discussion [ ]  
(d) Lecture method [ ]
14. Do you attend any biology seminar or workshop?  
(a) Yes [ ] (b) No [ ]
15. What kind of problem do you think hinders the teaching of biology in your school?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**USMANU DANFODIYO UNIVERSITY, SOKOTO**  
**FACULTY OF EDUCATION AND EXTENSION SERVICES**  
**DEPARTMENT OF SCIENCE AND VOCATIONAL EDUCATION**  
**STUDENT'S QUESTIONNAIRE**  
**INFLUX OF UNQUALIFIED TEACHERS IN TEACHING BIOLOGY IN**  
**SECONDARY SCHOOLS IN SOKOTO METROPOLIS.**

Dear Student

We are undertaking a research project on the above subject matter, we hope you will kindly give us your usual cooperation by supplying us with the information required and you can help by answering the following questions carefully and honestly; you are expected to tick the answer you strongly agree.

1. Name of student \_\_\_\_\_
2. Name of school /College \_\_\_\_\_
3. Class:           (a) SS I [   ]                                   (b) SS II [   ]                                   (c) SS III [   ]
4. Sex:            Male [   ]    Female [   ]
5. Age \_\_\_\_\_
6. Do you like the method used by your teacher in teaching you?  
    (a) Yes [   ]   (b) No [   ]
7. How often does your teacher use teaching materials like pictures, charts and models?  
    (a) Always [   ]   (b) Weekly [   ]   (c) Monthly [   ]
8. Do you understand your teacher while teaching you biology?  
    (a) Yes [   ]   (b) No [   ]
9. Did your biology teacher encourage you to ask questions?  
    (a) Yes [   ]   (b) No [   ]
10. Do you ever go for excursion where the knowledge of biology is applied?  
    (a) Yes [   ]   (b) No [   ]

11. Is biology the subject you like the most among your other subjects?

(a) Yes [ ] (b) No [ ]

12. Are you satisfied with the way your biology teacher teaches you during classes?

(a) Yes [ ] (b) No [ ]

13. What kind of behaviour did your teacher displays when teaching you biology in the class?

(a) Polite [ ] (b) Moderate [ ] (c) Harshly [ ]

(d) Friendly [ ]

14. Are you always afraid when ever your biology teacher comes into the class?

(a) Yes [ ] (b) No [ ]

15. What will you suggest your Biology teacher to do to make the subject interesting to you?

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