IMPACT OF THE USE OF INSTRUCTIONAL MATERIALS FOR TEACHING/LEARNING OF BIOLOGY IN SECONDARY SCHOOLS IN PATIGI LGA., KWARA STATE

BY

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CERTIFICATION

This is to certify that this research work was carried out by **Mohammed Maimunat with Matric Number: Kwcoed/il/22/0552** of the Department of Integrated Science/ Biology in Kwara State College of Education Ilorin, Nigeria.

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DEDICATION

I give glory to Almighty Allah for his mercy endureth forever in all my endeavour in life especially during the programme till the end.

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I acknowledge in the name of Almighty Allah the ancient of days, the lord of my life the savior of my soul, the omniscience Lord, the omnipotent God, the omnipresent God, for given me the oppurtunity to complete my programme. I give all glory, honor and adoration to God for sparing my life throughout this project write-up blessed by the Almighty Allah.

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ABSTRACT

The research work was conducted on impact of the use of instructional materials for teaching/learning of Biology in secondary schools in PATIGI Local Government Kwara State. A sample of three hundred (300) students and thirty (30) teacher was randomly selected from ten (10) secondary schools in PATIGI LGA, Kwara State. Using stratified sampling technique. The data collected through the administered questionnaire on the sample subject was analyzed through descriptive statistics of frequencies and simple percentage while all hypotheses were tested at 0.05 level of significance through the use of Pearson product moment correlation coefficient (PPMC) statistics. The findings of the study revealed that significant relationship exist in the opinion of respondents regarding availability, usage and utilization of instructional materials for effective teaching and learning at secondary school level, that teachers qualification and experience were the major factors affecting the use of instructional materials to influence students academic performance in agricultural science in secondary schools. Recommendations were made in line with the findings, which include the agricultural science teachers should endeavour to use and try to improvise instructional materials for effective teaching of agricultural science in secondary schools. Government should ensure the adequate employment of dedicated and qualified teachers and make funds available and sponsor the teachers attendance at conferences, seminars, and workshops on utilization of agricultural science instructional materials. In conclusion, students perform better when appropriate and improvised materials were made available and utilized in teaching. The knowledge and subsequent performance of students in both junior and senior secondary schools and agricultural science as a subject becomes more interesting to learn when it was taught by experienced, well committed, dedicated and qualified teachers. Teaching in schools will not be completed if the instructional materials needed to facilitate learning are not sourced for, and properly utilized for each topic designed to be taught and construct others using available local materials.

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CHAPTER ONE

INTRODUCTION

Background to the Study

The importance of science to any society cannot be over emphasized for it brings about technological advancement. Science is the foundation upon which any technological break through is built. The effort in science and technology are towards improving the quantity of individual and society at large. Science is a dynamic human activity concerned with understanding the working of our world. This understanding helps man to know more about the universe without the application of science, it would have been impossible for man to explore the planets of the universe. Infact, the awareness of the existence of other planets would not have been realized without science (Ogunniyi, 2015).

In our society today, we need the services of engineers, doctors, architects, geologist, pilots and technologists to mention but a few. Science subjects are fundamental to these professions, therefore, national security, high standard of living, good health, and general prosperity of Nigeria can be attained with science. the basic science subject comprises Biology, Physics and Biology Abdullahi (2018). According to National Policy on Education (FRN, 2023) Biology is one of the Science subjects taught at the Senior Secondary School I, II and III.

The realization of the objectives of Biology education programmes and their ability to improve students' achievement depends on a number of factors, which include the availability of equipment, tools, and materials, an adequate supply of well-qualified teachers, and the proper implementation and usage of equipment, tools and materials (Umunadi, 2024).

Education is the bedrock for survival, growth and development of any society. As a concept, it has generated a lot of controversies over the years. However, its relevance to individual and societal growth shows its significance to the economic, social, political and cultural development of human society world-wide. Every society has its way of educating its citizenry. In Nigeria, our education policy has been changing from one system to another in a bid to meet local educational demands and international best practices in education (Wokocha, 2021). Only recently, Nigeria education pattern shifted from 6-3-3-4 to 9-3-4 system of education. The 9-3-4 comprises six years of primary school categorized into lower basic (1-3) and middle basic (4-6); three years of Senior secondary School (JSS 1-3) now referred to as upper basic and three years of senior secondary school (SSS 1-3) and four years of tertiary education. (FRN, 2023).

Aromolaran (2023) noted that the lack of material and equipment was a significant problem in the Nigerian education system. The school system is also characterized by the rigidities of centralized curriculum development and a lack of human materials both of which restrict institutions from attempting more innovative and flexible approaches: Nwana (2023) observed that to equip students to succeed at a time of rapid curriculum change in science and technology, the practice of starving schools of equipment and funds needs to pay special attention.

The unavailability of these materials in teaching of Biology could make the lesson very boring and uninteresting to the learners and discourage learning thereby lead to low or poor performance. Instructional materials are very important because what students hear can easily be forgotten but what they see cannot be easily forgotten and last longer in their memory.

Abimbola (2019) in his own view enumerated the importance of instructional materials to teaching and learning process. The researcher observed that the primary purpose of instructional materials is to make learning more effective and also facilitate it. The researcher suggested that the teacher should also substitute for non-availability material by improvising so as to achieve effective teaching/learning of Biology.

Fakomogbon and Adegbija (2016) added that instructional resources or materials can be used by lecturers to overcome noise factors, such as misconception, referent confusion and day. Instructional materials facilities continuous teacher process and it is capable of sustaining the teacher and students retention of concept learnt (Usman, 2018).

The search for efficient and effective delivery of instruction to students has always been major concern of science educators. This is so as a result of repeated mass failure recorded in West African Senior Secondary School Examination (WASSCE) between 2018/2023 as reflected in SSCE result release by WAEC. Many factor were accounted to responsible for this mass failure among these factors are poor instructional strategies/methodology in teaching of Biology, student poor attitude towards the study of Biology. Poor practical orientation and lack of instructional materials which definitely must have a significant role to play in teaching and learning process of Biology. Instructional materials are defined by different authors (Akanbi, 2023; Leohard, 2024 and Mkpa, 2024) though they convey the same meaning when interpreted.

Instructional material could be explained as devices through which knowledge, skills, attitude, ideas, beliefs and values got transmitted to the learner by the teacher in order to ease teaching-learning process. Akanbi (2023) defined instructional materials as materials designed to enrich the teaching and learning processes and hence contribute to

better learning Leohard (2023), conceived instructional materials as "a wide range of materials and devices, designed to provide realistic imagery and substitute experiences in order to enrich curricular experiences of many kinds". From the various definitions given on the meanings of instructional materials, the best way of helping pupils to learn is to bring them face to face with the world which education intends to introduce to them (Mkpa, 2024). Akanbi (2023) stressed further that one way this can be attained is by using real objects in real life situations for instruction. Where real life situation are not possible, the alternative is for the teacher to use representations of real life situations. These representations are materials, devices and techniques that help the teacher to make realistic approach to his /her job.

Instructional materials are meant to improve the quality of education for effective academic performance of Biology students in schools. The performance of the student on the intended learning outcome provides the validation- loop on the success of the interaction and instruction (Bakare, 2016).

Statement of the problem

The major factors responsible for ineffective teaching and learning include shortage of qualified teachers, over loaded syllabi, inadequate and lack of laboratory facilities, library facilities, as well as instructional materials. (Agun, 2016) Yusuf (2017) observed that, instructional materials enhance students' academic performance when properly integrated into instruction. Availability and usage of instructional materials for effective teaching and learning is important to academic performance. Olutola (2019) categorically noted that idea of excellence in any school depends on the goals set for itself, but goals in turn, depends on what the teachers are capable of accomplishing in the teaching-learning

process that show a permanent change in the bahaviour of the students. Therefore, availability and usage of instructional materials for effective and other teaching equipment and facilities in Biology as a subject are of great importance to achieve effective performance of students. As important as Biology in the school curriculum, yet most concept of Biology is taught without using the appropriate facilities would enhance effective teaching and learning of the subject.

Hence, the present researcher intends to bridge the gap left by the previous researcher by finding out the impact of instructional materials for effective teaching/learning of Biology in Ilorin West Secondary Schools, Kwara State.

Purpose of the Study

The primary purpose of this study was to investigate Effect of instructional materials for effective teaching/learning of Biology in West Secondary Schools. The study will specifically deal with the following;

- To determine the accessibility level of instructional material used by teachers and students of Biology in Ilorin West Area.
- To determine the availability of instructional materials for effective teaching and learning of Biology and their utilization in selected secondary schools in Ilorin West Area.
- To determine the challenges of using instructional materials for effective teaching/learning of Biology in secondary schools in Ilorin West Area.

Research Question

The following research questions were designed to guide the study. They include the following:

i. What are the instructional materials that are available in Biology laboratories in senior secondary schools in Ilorin West Area?

ii. How often are the teachers and students make use of the available instructional materials in Ilorin West Area secondary schools?

iii. (3) To what extent are the available instructional materials for effective teaching and learning area accessible to teachers and students in senior secondary in Ilorin West Area?

iv. What are the challenges face by teachers and students of Biology in using instructional material in senior secondary schools in Ilorin West Government Area?

Research Hypotheses

The following null hypotheses were tested for the study.

Ho_1: There is no significant difference in the opinion of respondents regarding availability and uses of instructional materials for effective teaching and learning of Biology in senior secondary schools in Ilorin West Area.

Ho_2: There is no significant difference in the opinion of respondent regarding availability and accessibility of instructional material by teachers and students of Biology in senior secondary schools in Ilorin West Area.

Ho_3: There is no significant difference in the opinion of respondent regarding challenges encountered in the use of instructional material in senior secondary schools in Ilorin West Area.

Scope of the Study

This work was carried out in all the Areas in Ilorin West West. Since it is a descriptive study, there is need to use a large sample size so that an adequate information

that would be useful for this study can be got from this district. Hence can be generalized to other parts of Kwara state.

Significance of the Study

The findings of this research work would be of great importance to the following:- Teachers, school administrators, policy maker and curriculum planners, students, future researchers, among others.

The findings of this research work would be great benefits for teachers because the study would provide information on the importance of laboratory facilities, as a way of enhancing teachers' access and use of these materials in secondary school.

School administrators in secondary schools would benefit from the finding of this study because it would enable them to identify the problems militating against effective teaching and learning of various subject most especially Biology.

The finding has the potential to provide information to the policy maker and curriculum development bodies who are responsible for curriculum planning and development on the relevance of instructional materials for effective to curriculum implementation in schools. Furthermore, these bodies may provide the necessary support for the provision of audio-visual facilities and equipment in Nigeria secondary schools.

Furthermore ,the findings would prepare the minds of teachers on the need to integrate instructional materials for effective in their teaching and learning. The findings and recommendations of this study would assist the government on the need to provide adequate instructional materials for effective needed for enhancing teachers' performance in teaching and learning Biology and other subjects in schools.

Overall, the finding of the study would form a reference point for student and future researchers. Since this research is restricted to the availability and teachers use of instructional materials for effective in teaching and learning in schools, it is hope that the findings and recommendations would make significant improvement in the teaching and learning of Biology in Nigerian schools.

Operational Definition of Terms of Variables

The following major terms and variables are clarified as they are used in the study:

Accessibility: Act of describing the existing condition of a thing at a particular time. This would determine teachers' use of instructional materials for effective in senior secondary schools.

Experience Teacher: These are teachers who have been teaching for at least five years and above in secondary schools.

Hardware: Is the appliance, which is physical component that facilities that conduct of information from the software

Inexperience / Less –Experienced Teacher: Teachers who have not taught or teach up to five years in secondary schools.

Laboratory facilities: These include the utilization of people, materials, facilities, eqipnment, facilities, equipment, and procedures to achieve the desired instructional goals and objectives

Resource Centres: Are space or setting where educational materials, human and non-human materials are found. These materials can be designed, develop utilized, borrowed and stored in the centre for instructional uses.

Resource Material: Are information carriers that are used by teachers to present, illustrate and explain what is being taught to the student. These include; video, television, radio, overheard projectors etc.

Secondary Schools: Are schools which provide immaterialist education and prepare students for tertiary education.

Software: These are information delivery services; they are raw electronic information used to support effective teaching and learning of Biology at senior secondary schools level.

Utilization: This refers to the level of application of instructional materials for effective in teaching and learning of Biology in a classroom setting.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviews the work of the scholars who had conducted researches into relevant issues relating to the present research study. It is on this premise that the research questions were formulated for the study. The literature review is carried out under the following sub-headings:

- Concept, Nature, and classification of instructional materials for effective teaching
- The relevance of instructional materials for effective in Teaching and Learning Process
- Availability , Accessibility and Utilization of Laboratory facilities
- Challenges of Teachers in using Laboratory facilities
- Appraisal of the literature Reviewed

Meaning, Nature, Function and Classification of Instructional Materials for Effective

Instructional material for effective is a summation of the systems approach based on research it is concerned with the facilities of human learning through the systematic identification development organization and utilization of full range of learning materials and through the management of these materials.

Instructional materials play very significant roles in teaching and learning. They are powerful to convey instructions, when systematically designed developed and utilized, they are capable of motivating learners to learn, when the learner's need interest and

attentions are marched to the materials. They provide appropriate feedback and thus facilities learning.

There are varieties of instructional materials for effective available in world today. These could be classified into three categories namely. Audio, visual and multi-sensory materials.

Audio: This is a medium instructional practice that appeals to the sense of hearing, but the most commonly used tool for the job is the spoken word. Gadgets for magnifying and reproducing audio sound include radio set, record player, reel to red audio tape, cassette player/recorder (Uto, 2024).

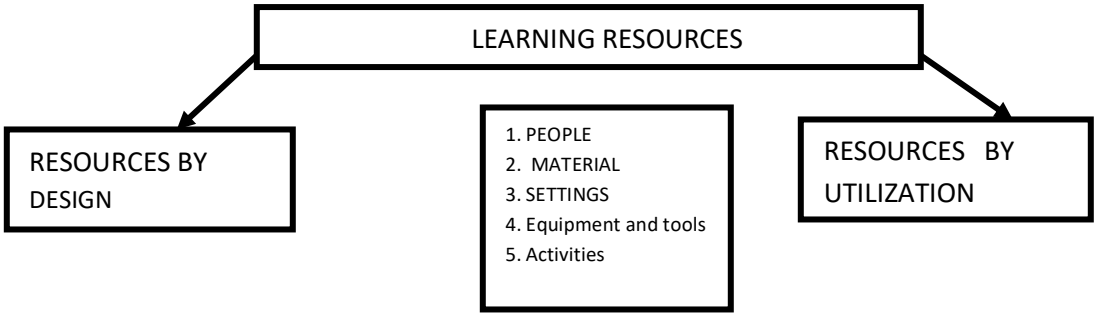
Visual (s) this could be regarded as a medium that appeals to sense of sight in teaching /learning situation. These are things that one can see, feel, or tough either projected. They could be either dimensional, or 3- dimensional, 2-D visual include charts, flannel graphs still or flat pictures slides and 3-D visual includes realia and models. The non-projected visuals neither need the use of battery not electricity before they function adequately well.

Audio: This deal with transmission of voice and usually with telephone with use of quality voice transmission technology.

Video: Each participant here will be in a well equipped room at different locations having in the room microphone, studio camera, TV monitor screen and all necessary studio broadcasting gadgets. Computer conferencing: This deals with printout exchange of discussion between the participants at different locations. Others are electronic mail, hyper text, video text these equipments serve different purposes and can be well adapted into educational system.

Audio-visual materials: An audio-visual materials enable learners to hear and see details of instructional process, which enhance their learning. It is a medium in instructional practice that appeals to more than one sense organ at the same time, with a view to motivate and sustain learner attention, thereby improving their capabilities. They are materials, which make it possible for involvement of at least two of the sense of sight, hearing smelling tasting or touching while decoding a message. These categories of materials include message transmitted via television set, video set, video tapes motion film/picture, computer base learning, interest, CDR are included in audio visual or materials.

Educational materials are things used to meet educational need, it include anything which can be used as an object of study or stimulus to the students it is an aid to teacher materials which include books, newspaper, magazines, all variety of audio visual materials, models, real objects, specimens, resource persons and the teacher or experts who of course is the manager of learning materials. Learning materials are in five categories namely: peoples, materials, equipment and tools, setting and activities. Some materials are developed and use in education. Example of such is in the figure I which shows learning materials in educational technology as adapted from salami (2018).



Adopted from Usman (2012); Availability, lecturers' access to and use of laboratory facilities.

Instructional resources are therefore educational materials which is capable of increasing the student potential towards learning and teaching (Salami, 2016). Instructional materials for effective are materials or materials of form of materials that the teachers and the learners use in teaching-learning situations to improve the quality and quantity of instruction. Other terms used to refers to these materials or materials are audio-visual materials, teaching aids laboratory facilities, educational materials, curriculum materials, educational materials among others (Ajayi, 2017).

The teaching of instructional materials are effective used in the formal educational setting in graphics, photographic, audio, print –script writing and design for the whole instructional system which is usually referred to as an integration of set of materials, equipment, method and personnel performing efficiently and functioning to accomplish one or more learning objectives.

In all, the aim of the development and production is facilitate the achievement, hence orientation towards the intended learning outcome inform of effective course creation, course maintenance and course transmission. The producer or developers of the materials this needs some knowledge and stalls to enable him function effectively in his programme.

Various number of materials and activities that they can be incorporated into an educational function has been identified. Reading textbook and articles from printed materials, examine diagrams and photographic, viewing films and coloured slides, handling real objects and models, studying demonstration materials, listening to audio

tapes, conducting actual stimulated experience, discussing subject matter with other student and teachers.(Adegbija, 2015).

Thus, instructional materials are categorized in the following groups:

1. Printed materials
2. Project materials
3. Audio-inputs
4. Real objects and
5. Human interaction

Educational resource materials are referred to as "learning materials use to develop skills of inquiry and facilitate effective understanding in the classroom interaction" teaches need to be properly trained and equipped with necessary skills required in handling and use of these instructional materials for effective to translate information into print, visual, audio-visual and realistic forms to improve communication in the classroom.(Brown and Strygler, 2017)

Education resources materials therefore stand to pivot the educational programmes and its implementation to achieve the intended educational outcome, their uses in school in teaching and learning process to facilitate an appropriate learning outcome (Salami, 2016).

Relevance of instructional materials in Teaching and Learning processes

Material are plural word for medium which has attracted many definitions form different authors. According to Adegbija (2015), materials is the totality of materials we put together to carry information. This means that, a medium or materials is or more vehicle through which information are moved from the sender to the receiver. However, a

medium becomes instructional or educational purpose. This made Salami (2018) to submit that, resource materials are integrated into the classroom instruction as aid to teaching and learning for organized presentation of instruction and sequentially appeal to human sensory organs to increase perceptual ability and stimulate human reasoning.

Based on the above reasons, any medium to be used for required qualities or attributed if not, such a medium or materials will not be appropriate for use as instructional medium, attributes required of a medium to make it qualify as instructional materials for effective include capital of such medium to show objects in motion, in colour and in three dimensional forms. It can also be related to the provision of printed works, spoken words, visual and auditing stimuli to psychological response. In the categorization of Yusuf (2018) mentioned instructional material for effective to include, print and chalk and chalkboard, graphic materials presentation. The author explained further that, a print material is the oldest materials in educational which are useful for information or motivation purpose.

Examples of such print materials are textbooks, periodicals, encyclopedia, newspapers, and magazine etc.

However, chalk and chalkboard are used to present instructional content as indicate sketch book and they are essentially temporary for delineating idea, instructional materials teaching for effective has diverse of contribution role in the process of teaching and learning, the importance according to Salami (2023) are highlighted as fellows:

- It provides many instructional techniques to solve teaching and learning problems.

- It helps to provide a rational method of selection of instructional materials for effective and functional teaching and learning this enhance development and effective management of education.
- Materials motivate the learners to learn with relatively easy.
- It facilitate easy learning and recall and enhances the standard of perform of the teacher through effective materials integration in the classroom instruction.
- It collaborates and enhances cooperative learning and provides scaffolding to support higher level thinking, and increase learner independence.

Since teaching learning are usually an attempt at problem solving, it is therefore required that consideration should be given to factors of interaction. Condition and constraints, materials and efforts, person and personnel. People and procedure, essential to fulfill and facilitate the achievement of the desirable educational outcomes. It is therefore very essential, that the objective to be achieved is un-abigiously specified and analyzed. Materials to be are appropriately itemized and sequentially planned and utilized.

Classification of instructional materials and software. The following are different types of materials from which a medium or combination of materials can be selected from these include:

1. Printed Materials/ Electronic

These include the following: Close circuit television films

(16mm, 32mm etc) film strips

Opaque queered transparency

Slides teaching machine

television video computers.

2. Audio

These include the following: Amplifiers cassettes

earphones grainophones.

Language laboratory loud

Speaker microphones stereo

System tape recorders

Phonographic radio.

3. Non- projected visual

These include:

a. Educational Ward (I-dimensional): Adhesives bulletin

boards chalkboard flannel graph

boards magnetic board plastic graph

b. Pictorial (3- dimensional objects)

These includes: demonstration dramas

Displays exhibit and field trips.

Home made television modules/

globes stimulators and games.

c. (2- dimensional objects)

These includes: flip chart mobiles poster

Sketches still pictures wall chart

d. (printed text (2- dimensional):

these includes: Books, brochures charts, course manuals handouts

leaflets programmed instruction correspondence.

4. Audio- visual Materials

These includes: Animals artifacts Television video system drama/ demonstration film (8mm, 16mm, 35mm).

5. Realia

These includes: Exhibits Field trips Real objects

6. Resource Persons

These include: professionals e.g Doctors, Lawyers, Accountant etc. Administrations, teachers, Extension workers, trainers etc

specialist or community resource person e.g chiefs, legislators, politician industrialist etc.

It is equally important that teachers are aware of the role and relevance of the instructional materials for effective to instruction. Southnya and Adegbija (2017) summarized the relevance of instructional materials for effective teaching & learning as follows:-

1. Development of counting thought in learning.
2. Making learning more permanent
3. They appeal to all categories of learners
4. Arouse of both interest and attention of learners
5. Provision of concrete basis for conceptual thinking for learners.
6. Contribution to the growth of meaning

7. Offering of reality of experience and contribution to efficiency, depth and variety of learning.
8. They are unbiased and do not discriminate with regards to age, status, ethnicity, religion etc.

It is however very important that despite the fact the number of instructional materials for effective that can be used to enrich construction are in exhaustive, select for enriching their instruction match their instructional objectives and that such "medium will equally be appropriate and convenient for the teachers to operate (Southnya, 2017).

Availability, Accessibility and Utilization of Laboratory Facilities

In teaching and learning of situation, it is agreed that instructional materials for effective are important because they help teachers to enhance the quality of instructions. Availability of suitable instruction materials in good supply and in rich variety and range is essential in education and especially for the achievement of curriculum objectives Ibitoye (2021) noted some of the advantage of instruction materials in heighten motivation for learning provide freshness and variety, appeal to students varied abilities, encourage active participation, give needed reinforcement and widen the range students experienced. Dale (2018), Ofoefuda (2016), Ocho (2023) noted that some instructional materials used in schools are:

a) The Chalk Board: The chalk board is instructional material. It can be adopted for large group instruction, both inside the class room and outside the classroom. It can be use all the subjects at all level of our system.

b) The Bulletin Board: this is simply a medium of passing information to the students. It is a valuable teaching tool, it is use in the classroom to motivate and supplement lesson and the basic principle of using this board is to:

i) Locate the bulletin board at a strategic position

ii) Good lighting of the display is essential

iii) Provide artificial lighting where natural light is inadequate

iv) Avoid clouding the board with two many materials

v) Have a variety of materials to maintain internally

vi) Use brief clear caption and good lettering through illustration presents.

vii) Relate the materials to class discussion and chart

According to Ocho (2024) charts are combination of such picture: graphic, numerical verbal materials, which together are most likely to present clear visual summaries of important process or relationships. The term chart can be applied to several different types, they may be classified according to use, functions or similarities of constructions. Specific chart can be designed for special purpose, for instance, a reading chart to assist readers to associate words with pictures a word reading charts to motivate group pictures into reading and to assist in developing eye-fixation of movement skills.

Purpose of chart: Oyedele (2024) highlighted the following purpose of chart

(I) To show relationship by means of pictures facts, figures. Or statistics

(II) To represent materials symbolically

(III) To summarize information

(IV) To show continuity in progress.

(V) To represents abstract ideas in a visual form

(VI) To show continuity in progress.

(VII) To encourage the use of other laboratory facilities.

(VIII) To create problems and stimulate thinking.

The position now however is that most secondary schools do not have laboratory facilities. Apart from the sad situation, most teachers were not trainees in the use of available materials. Eze (2023) note that the federal government has recognized the importance of instructional materials for effective and this informs the established of education technology centre at Kaduna. A good Biology teacher should be able to teach the subject in a likely and stimulating manner.

In a bid to find alternative of making instructional materials for effective available for use. Dike (2024) observed that a creative teacher can construct some of the needed instructional materials for effective and a well teach student how to construct these materials. Okpala (2019) noted that if audio-visual materials are properly utilized, they will enable the teachers to achieve the following:

(a) Reduce verbalization.

(b) Humanized and utilized the subject matter.

(c) Stimulate self-activity, make new topics interesting

(d) Supply concrete basic conceptual thinking

(e) Increase ability of retention

(f) Develop keen observation

(g) Foster creative imagination

(h) Lesson the burden of teaching/ supporting view.

Most secondary schools do not have laboratory facilities.

Apart from this state of affairs, most teachers were not trained in the use of such material. It is therefore, logical to believe that even the teaching colleges, the materials do not exist or that the ones they have are outdated and obsolete. In a study on effective utilization of visual aids in Biology, Bridge (2017) pointed out that teachers need to increase the knowledge in the field of Audio- Visual material and use them to make their lessons attractive and interesting to students.

Madu (2016) noted that in teaching office practice or secretarial duties for instance, a model office equipped with relevant tools and materials used in regular office must b available. Most of the secondary schools in our society today lack adequate instructional material. This ugly situation affect teaching and learning of concept. It is very essential to us instructional material. The teacher who utilize these materials should be properly trained on how to handle the, materials expertly. Ayoko (2019) suggested the following as factors to be considered in the selection of instructional resources.

i. Any instructional resources selected to aid teaching learning process should be able to facilitate learning.

ii. It must be appropriate for the concepts or topic to be taught in the situation and environment were learning is taking place.

iii. Consideration should be given to the relationship between lesson objective and contented no one hand and peculiar characteristics of the instructional resources we want o use on the other hand.

iv. The instructional resources should make learners more active.

v. It should not be considered in isolation. It is rather on integral art of overall instruction progress and development.

Hence, in the selection and use of instructional resources in teaching process of Biology in the Nigerian secondary schools the above factors should be at the back of the mind of the teacher in other to avoid himself with advantages of using appropriate resources at his disposal in selecting the needs of the students.

Challenges faced by teachers using Laboratory facilities

Oyedele (2016) emphasized that in everywhere, teachers need to make the fullest use of print materials. The author noted that one of the reason why available materials are not used before by many teachers in school and colleges is that the teachers lack the necessary in this area. Obi (2016) highlighted the problems of lack of time in the school time table for effective utilization of instructional materials for effective the author pointed out that the present practice of 35minutes and two periods in a week does not augur well for Biology subjects. The author also pined that effectiveness and efficiency in classroom and thorough supervision to be achieved the number of students in the class should be fifteen. Time has always be a major constraint in the effective utilization of instructional materials for effective most of these materials consume a lot of time to set up and dismantle within the allowed time on the table.

There are many challenges in using laboratory facilities.

These challenges include:

a. **Funds:** stated that " to create suitable environment for teaching and learning and produce the materials and equipment for teaching is a necessity" Thus Ukeje (2016) highlighted the centrality of financial provision in the advancement of educational objectives. The researcher that the "issue of educational is clearly the central pivot". This is so because the vital issue of the nature, quality, and efficacy of educational system largely

depend on the lavel as well as the appropriateness and management of the financial provision.

c. **Lack of Accurate statistical Data of the Teaching Materials:** Accurate statistical data of teaching materials are very important in the educational sector. Proper records of teaching materials (human and material) will help in effective management utilization and achievement of educational objectives. Some administration fail to provide accurate and reliable data on the number of staff, learners enrolled and even materials available. These militate against effective management and utilization of teaching materials.

Unreliable information on the number of teachers, learners, and materials available affect planning and decision making.

c. **Poor Maintenance culture:** Facilities and instructional materials for effective are not adequately maintained. Some administration prefers building new classroom instead of maintaining the old ones. Laboratories and their equipment are allowed to waste, text books and other instructional materials for effective are allowed to rot away in the cartons, instead of displaying them on the shelves for easy retrieval and usage. The management and utilization of these teaching materials are not encouraging. There is need to re-dress the situation for effective learning to take place.

d. **Policy on maintenance, management and utilization of teaching materials:** policy provides guidelines on the type of action to be taken on any issue. Where there is no policy, administration will act without a guide. Olutola (2023) noted that “in Nigeria, there has not been a clearly defined policy on maintenance culture, either in educational infrastructural facilities or laboratory facilities” This implies interlay, that lack of policy on

maintenance; management and utilization of teaching material affect the achievement of educational goals and objectives.

e. ***I*nadequate facilities and laboratory facilities:** students learn better when the facilities like buildings, comfortable seats for teachers and student, equipment, electricity and good water supply and instructional material are available. When these facilities are lacking learners cannot learn well and these affect the achievement of educational objectives. The available teaching materials should be managed and utilized properly.

f. **Lack of teachers skill to use instruction materials:-** Most teachers are unable to update their knowledge through exposure to conferences, workshop and seminars. They do not have access to current journals, textbooks, internet facilities. They, therefore, rely on their old textbooks, notes and materials. This lack of exposure on the part of teacher affects his/her management and utilization of teaching materials. He /she impacts outdated knowledge to the learners. The teacher should be capable of managing and using teaching materials for effective learning to take place.

g. **Allocated Time:** This is a big challenge in the utilization of teaching materials. In the school time table, the time given for teaching and utilization of teaching materials are very short. In fact, the teacher concentrates on on the theoretical aspect and pays less attention to practical aspects. This affects the performance of the learners. The teaching –learning processes will be teacher centered instead of learners centered as stipulated in Federal republic of Nigeria's (2023) , National policy on Education that "educational activities shall be centered on the learners for maximum self-development and self- fulfillment".

h. **overloaded Curriculum:** when the curriculum is overcrowded with topics, management and utilization of teaching materials become difficult. The teacher will be

rushing to over the topics in the curriculum and no attention will be given to teaching materials in the class.

Accoding to Ivowi (2015), the consent of the curriculum is satisfactory though overloaded. The issue is not the large content presented to the learners but the availability of time and materials for the learners but the availability of time and materials for the coverage of the content. This implies that, when the curriculum is overloaded, management and utilization of teaching materials become ineffective.

Appraisal of the Literature Reviewed

The use of instructional materials for effective is important in teaching. Effective teaching and learning cannot take place without adequate and preparation and use of instructional materials for effective provided should be relevant, adequate and to the ability levels of the students. Since what students see physically can easily be assimilated and remembered when required, real objects should as much as possible be used to be able to have positive change of student's behaviors to the subject. It also offer a variety of experiences which stimulate self activity with the overall effect of making learning to be more indispensible. Where these materials are scare, teachers should be left to improvise, innovate and invent and clue regard should be given to accuracy. The greater the accuracy in the design, the clearer the mental impression created on the learners. A few institutions with web availability were also disconnected as they cannot afford to pay their access fee.

This findings correlates with that discoveries of Fakeye (2018) and Oyejola (2007) that most collages in Nigeria are not well prepared for the utilization of ICT. It is also good to understand that the tendency to use ICTs in teaching and learning activities is highly

determined by the availability of these resources in the schools. In a study that explored factors that influence the utilization of ICT in Sub - Saharan African schools. Kiptalam and Rodriguess, (2021) reveal that the integration of technology into education is exceedingly reliant on the accessibility and availability of the resources in schools. This study also believed that Nigeria will not be an exception.

CHAPTER THREE

METHODOLOGY

This chapter deals with techniques that were involved in carry out this study. The chapter is presented under the following sub-heading:

- Research type ,
- Population of the study,
- Sample and sampling Techniques
- Research instrument,
- Validation of the instrument ,
- Reliability of the instrument,
- Procedure for Data collection, and
- Data Analysis Techniques.

Research Type

This study is a descriptive research using the survey method. Osuala (2016) explains that descriptive research gives a picture of a situation or a population as its exists, hence the adoption of the descriptive survey.

Population of the study

The target population for this study was all senior secondary school teachers and students in ILORIN WEST area of Kwara state. The population size of the teachers with student population of three thousand eight hundred and eighty nine (3,889) Senior Secondary Schools (SSS) (Teaching Service commission, 2016).

Sample and sampling Techniques

The sample of this study study comprises ten (10) senior secondary school selected randomly from ILORIN WEST Area. A total of thirty (30) teachers, three (3) from each of the sample schools was selected through stratified random sampling techniques was employed to select three hundred (300) students, thirty (30) from each of the sampled schools. In all a total of 330 respondents were selected for the study.

Research Instrument

The instrument for this study was a researches designed questionnaire titled Questionnaire "Questionnaire on Biology teachers use of instructional materials. The research instrument was divided into two sections. Section A is designed to obtain information on demographic data of the respondents. Section B contains 18-items questions relating to the concept of the topic in which the Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD).

Validity of the Instrument

The instrument was submitted to the Researcher supervisor and two experts in the Department of Science Education, National Open University of Ilorin West Study Centre for necessary corrections, suggestions and amendments to ensure the face and content validity of the instrument. However, the corrected version was submitted to the project supervision for final approval before the administration.

Reliability of the instrument

Reliability of an instrument according to Olawumi (2016) is defined as the degree of consistence of a test instrument. Thus in order to determine the reliability of the instrument, the instrument was administer to twenty (20) teachers in senior secondary schools outside the target population twice within an interval of two weeks. Pearson

product moment correlation coefficient was used to determine the reliability index. Which shows that the instrument was reliable.

Procedure for Data collection

The copies of the questionnaire were administered personally by the researcher and with two research assistance. The researches seek permission from the school authorities and the teachers before the administration of the questionnaire was done. Filled and completed questionnaire were collected from the respondents by the researcher after completion before leaving the school. 420 questionnaire forms were administered and 330 copies were completed and returned.

Data Analysis Techniques

The collected data were analyzed using frequency counts and percentage in order to answer the research questions raised for the study, while all hypotheses tested at 0.05 level of significance using Pearson Product Moment correlation (PPMC) statistics.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

This chapter aims at analyzing and discussing the major findings that come into being from the data collected from the field through the use of questionnaire.

Data Analysis

The following table showed the distribution of respondents.

Table 1: Distribution of respondents on the basis of Gender (Teachers).

Gender	**Frequency (No)**	**Percentage (%)**
Male	13	43.3
Female	17	56.7
Total	**30**	**100**

Result in table 1 show that 13 (43.3%) of male teachers participated in the study while 17 (56.7%) are the female teachers sampled.

Table 2: Distribution of respondents on the basis of Gender (Students).

Gender	**Frequency (No)**	**Percentage (%)**
Male	135	45.0
Female	165	55.0
Total	**300**	**100**

Result in table 1 show that 135 (45.3%) of male teachers participated in the study while 165 (55.0%) are the female teachers sampled.

Table 3: Distribution of respondents on the basis of qualification (Teachers).

Qualification	**Frequency (No)**	**Percentage (%)**

B.ED/B.SC	11	36.7
HND	6	20.0
NCE	10	33.3
OND	3	10.0
Total	**30**	**100**

From the table above, it shows that the teachers with qualification there NCE qualification there 10(33.3%) while 11(36.7%) have B.ED/B.SC, 6(20.0%) unit HND and 3(10.0%) and teacher with Ordinary National Diploma (OND).

Table 4: Distribution of respondents on the basis of working experience.

Working Experience	**Frequency (No)**	**Percentage (%)**
0–3 years	6	20.0
4–5 years	12	40.0
6–10 years	6	20.0
10 years and above	6	20.0
Total	**30**	**100**

The table shows that 6(20.0%) of the teachers have spent 0–3 years in service, 12 (40.0%) with the highest with 4 -5 years teaching experience while 6(20.0%) and 6(20. 0%) have spent 6–10 years and 10years and above in service respectively.

4.2 Answering of Research Questions

RQ_1: What instructional materials in Biology are available and use in most senior secondary schools?

Table 5 Summary of respondent responses regarding the available instructional materials

S/N	ITEMS/STATEMENTS	SA (%)	A (%)	SD (%)	D (%)
1.	The school provides adequate and relevant materials for teaching of Biology.	29 (8.8)	50 (15.2)	135 (40.9)	116 (35.2)
2	Instructional material such as; chalkboard, bulletin board are available.	98 (29.2)	82 (25.8)	70 (21.2)	77 (23.2)
3.	There are resource centres in the school which support the use of materials for teaching, learning processes.	35 (10.6)	23 (6.97)	89 (27.1)	183 (55.5)
4.	Most instructional materials available in the school were obsolete and not relevant in teaching of Biology.	40 (12.1)	64 (19.4)	96 (29.1)	130 (39.4)
5.	Uses of instructional materials provide effective focus for student in Biology.	196 (59.4)	74 (22.4)	48 (14.5)	12 (31.5)

Table 5 above shows that 29(8.8%) strongly agrees to the item 1, 50(15.2%) agreed while 135(40.9) and 116(35.2%) were with disagree and strongly disagree responses. On

item 2, 98(29.7%) strongly agreed, 85(25.8%) agreed while 70 (21.2%) and 77(23.3%) were with disagreed and strongly disagreed. On item 3, 35(10.6%), strongly agree 23(6.97%) agreed 89(27.1%) disagreed and 183(55.5%) strongly disagree.

In response to item 4, 40(12.1%) strongly agree 64(19.4%) agreed, 96(29.1%) disagree while 130(39.4%) strongly disagreed, also on item 5, 196(59.4%) strongly agreed that instructional material provide effective focus for student in Biology, 74(22.4%) agrees, 48(14.5%) disagreed and 12(3.6%) strongly disagreed.

RQ_2: To what extents are the available instructional materials in Biology accessible to teachers in senior secondary schools?

Table 6 Summary of respondent's responses regarding the accessibility of instructional materials

S/N	Statement/Items	SA (%)	A (%)	SD (%)	D (%)
6.	Instructional materials provided by the schools were constantly accessed and utilized by Biology teachers.	82 (24.8)	53 (16.1)	131 (39.7)	64 (19.4)
7.	Teachers' lack the skill to use the available instructional material.	130 (39.4)	69 (20.9)	68 (20.6)	63 (19.1)
8.	Lack of awareness on the availability of instructional materials prevents their usage for instructional purposes in Biology.	160 (48.5)	89 (27.1)	48 (14.5)	33 (10)

9.	Teachers become more effective when they use appropriate materials.	175 (53.0)	60 (18.2)	55 (66.7)	40 (12.1)
10.	Flexibility of instructional material promotes teacher's access and utilization.	40 (12.1)	64 (19.4)	96 (29.1)	130 (39.4)

Table 6 above shows that 82(24.8%) strongly agrees to the item 6, 53(16.1%) agreed while 131(39.7) and 64(19.4%) were with disagree and strongly disagree responses. On item 7, 130(39.4%) strongly agreed, 69(20.9%) agreed while 68(20.6%) and 63(19.1%) were with disagreed and strongly disagreed. On item 8, 160(48.5%), strongly agree 89(27.1%) agreed 48(14.5%) disagreed and 33(10.0%) strongly disagree.

In response to item 9, 175(53.1%) strongly agree 60(18.2%) agreed, 55(16.7%) disagree while 40(12.1%) strongly disagreed, also on item 10, 140(42.4%) strongly agreed that accessibility and utilization of instructional material encourage student to offer the subject and make lesson delivery easier, 84(18.2%) agrees, 48(14.5%) disagreed and 53(16.1%) strongly disagreed.

RQ_3: What are the challenges in utilizing instructional material in Biology in senior secondary schools?

Table 7: Summary of respondent's responses regarding the accessibility of instructional materials

S/N	Statement/Items	SA	A	SD	D

		(%)	(%)	(%)	(%)
11.	Accessibility and utilization of instructional material encourage student to offer the subject and make lesson delivery easier.	140 (42.4)	84 (54.6)	48 (14.5)	53 (16.1)
12.	Teachers do not have basic knowledge and skill for effective utilization of the instructional materials.	49 (14.8)	78 (23.6)	109 (33.0)	94 (28.5)
13.	Time has always been a major constraint in the utilization of instructional materials.	56 (17.1)	39 (11.8)	160 (48.5)	75 (22.7)
14.	Poor funding for the maintenance and acquiring more up-to-date equipment.	170 (55.5)	89 (27.1)	35 (10.6)	36 (10.9)
15.	Lack of accurate statistical data on available instructional material creates some challenges to level of utilization.	65 (19.7)	42 (12.7)	158 (47.9)	65 (19.7)

Table 7 above shows that 49(14.8%) strongly agrees to the item 11, 78(23.6%) agreed while 109(33.0) and 94(28.5%) were with disagree and strongly disagree responses. On item 12, 56(17.1%) strongly agreed, 39(11.8%) agreed while 160(48.5%) and 75(22.7%) were with disagreed and strongly disagreed. On item 13, 170(55.5%), strongly agree 89(27.1%) agreed 35(10.6%) disagreed and 36(10.9%) strongly disagree.

In response to item 14, 65(19.7%) strongly agree 42(12.7%) agreed, 158(47.9%) disagree while 65(19.7%) strongly disagreed, also on item 15, 130(39.4%) strongly agreed, 88(26.7%) agrees, 49(14.8%) disagreed and 63(19.1%) strongly disagreed.

4.3 Hypotheses Testing

Three hypotheses were formulated in the course of this research work all the hypotheses shall be test at 0.05 alpha level of significance using Pearson Product Moment Correlation (PPMC) Coefficient statistical tool.

Ho_1: There is no significant difference in the opinion of respondents regarding availability and usage of instructional materials for teaching and learning of Biology at senior secondary schools.

Table 8: Summary of PPMC (r) analysis showing the difference in the opinion of respondents regarding the availability of instructional materials in teaching and learning.

Variable	N	Mean	SD	DF	Cal. r-Value	Crit. r -value	Remark $P \leq 0.05$
Teacher's professionalism	330	98.42	36.02	228	0.129	0.0083	Significant
Uses of instructional materials	330	87.11	35.84				

$p<0.05$ level of significance (one tail)

From the table above there is significant difference in the respondent's responses regarding the availability and usage of instructional materials in teaching and learning of Biology at senior secondary schools. Consequently, the hypothesis (HO_1) was rejected since the calculated r-value is greater than the tabulated r-value (i.e 0.129 > 0.0083) at the degree of freedom of 228 and alpha level of significance of 0.05.

Ho_2: There is no significant difference in the opinion of respondent regarding availability and accessibility of instructional material in senior secondary schools.

Table 9: Summary of PPMC (r) analysis of differences in the opinion of respondents regarding accessibility and utilization of instructional material in teaching and learning.

Variable	N	Mean	SD	DF	Cal. r-Value	Crit. r -value	Remark
Teacher's experience	330	110.11	52.11	229	0.139	0.0089	Significant
Use of instructional materials.	330	98.60	53.04				

$p<0.05$ level of significance (one tail)

From the table above the calculated r-value of 0.137 is greater than the tabulated r-value of 1.96 at the degree of freedom of 229 and level of significance of 0.05, this lead to the rejection of the hypothesis, indicating that there is positive correlation in the opinion of respondents regarding the accessibility and utilization of teaching and learning at secondary school in ILORIN WEST ., Kwara State.

Ho_3: There is no significant difference in the opinion of respondent regarding challenges and utilization of instructional material in senior secondary schools.

Table 10: Summary of PPMC (r) analysis showing the respondents responses regarding the challenges utilizing instructional material in teaching and learning.

Variable	N	Mean	SD	DF	Cal. r-Value	Crit. r -value	Remark
Challenges	330	116.11	46.11				
Challenges of utilization instructional materials	330	108.20	52.07	229	0.132	0.0084	Significant

$p<0.05$ level of significance (one tail)

From the table above the calculated r-value of 0.132 is greater than the tabulated r-value of 0.0084 at the degree of freedom of 229 and level of significance of 0.05, this lead to the rejection of the hypothesis, indicating that there is positive correlation in the opinion of respondents regarding the challenges of utilizing instructional materials in senior secondary Ilorin West, Kwara State.

Discussion of Findings

The study found that teachers who were rated as ineffective considering the variables for the study actually made appreciable uses of instructional materials to enrich their instructional packaged. However, the difference found in the mean effectiveness of teachers on materials usage was statistically not significant.

Having analyzed the results of the study, the result of the findings is explained as thus:

Research hypothesis one has been rejected based on the analysis in table 4 since the calculated r value of PPMC is greater than the tabulated r value of PPMC. The study revealed that there is a statement difference in the opinion of respondents regarding the availability and usage of instructional materials in teaching and learning of Biology at senior secondary schools in Ilorin West metropolis Area of Kwara State.

This finding is in line with the views of Adegbija & Onasanya (2007) who opined that instructional resource or materials usage in teaching and learning process has strong correlation to the level of availability. The findings also corroborate the views of Abimbola (1997), Abolade & Olumorin (2024) and Afolabi (2023) who submitted that teacher accessibility of instructional materials available and the extent of the utilization.

Research hypothesis two has also been rejected based on the analysis in table 5. This means that the respondents responses regarding the accessibility and utilization of instructional materials has positive correlation to teaching learning of Biology at senior secondary school level on Ilorin West, Kwara State. This finding is support the view of Yusuf (2023) and Fawole (2002) who perceived teachers' experience an important component on the uses and accessibility of instructional materials to support their conventional methods of teaching. The level of accessibility of teachers determines their level of usage.

Research hypothesis three has been rejected based on the analysis. This means that the respondent perceive strong relationship between various challenges and the utilization of instructional materials in teaching and learning process at the senior secondary schools.

This finding also corroborates that of Akindolu (1995) and Jekayinfa (2018) who in respective findings revealed that teacher qualification, experience and level of motivation received factors that enhance teachers' instructional qualities and accessibility to their usage.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

This research was a survey work on the availability and use of instructional materials in teaching and learning of Biology in Ilorin West Area. A descriptive research design of survey type was adopted for the study which involves hypotheses testing and uses of questionnaire to collect relevant data from the sample respondents within the target population. A sample of three hundred and thirty (330) respondents made up of biology education teachers and selected students at senior secondary school classes were selected randomly across twenty six (26) senior secondary schools in the study area, questionnaire form the basis for data collection from sample population of the study.

Based on the analysis of data collected from administered questionnaire, it was gathered that instructional materials provided were not adequate in some of the school sampled and where available, they are not appropriate to teach the subject. Also there is poor accessibility of teachers to most of the instructional material provided.

Conclusion

Based on the finding and analysis of this research work, it was concluded that;

- There is significance difference in the opinion of respondents regarding availability and usage of instructional materials for teaching and learning of Biology at senior secondary school.

- There is significance difference in the opinion of respondents regarding availability and accessibility of instructional materials for teaching and learning of Biology at senior secondary school.
- There is significance difference in the opinion of respondents regarding challenges and utilization of instructional materials in senior secondary school.

Recommendations

Instructional materials are important materials needed for the realization of instructional objectives and education goals, thus the level of use of these resources in teaching and learning should be improved upon in view of the conclusion drawn. However, it was recommended that;

1. Curriculum planners and implementation and educational policy makers in should sanitize the school and teachers on the need to put more emphasis on utilization and improvision of resources materials in teaching and learning of Business Education subjects.
2. The government as a matter of policy should recruit more qualified graduate teachers to teach at senior secondary school level most especially Biology.
3. Adequate instructional materials should be provided for effective teaching and learning process, Every schools should have store where instructional materials would be kept and care for and the store should be managed handle by each subject teacher.
4. The government as a matter of policy should recruit more qualified graduate teachers and retained of materials teachers to help teaching effectively,

instructional materials to make teaching more effective in secondary schools, most especially in Biology.

5. Criteria for instructional materials selection should be based on it suitability to function for the purpose it is designed for.
6. Finally the existing education materials centre in all the states should be reactivated, well equipped and made easily accessible to the students and teachers for effective usage. All teachers should be encouraged to use local materials as teaching materials to teach in every school at all level in ease of scarcity of real material.

Suggestions for Further Studies

The research for further studies could be carried out in the following area:-

Effect of the use of instructional materials on the students' academic performance in primary and secondary schools should be compared.

The place of instructional materials on the quality of instructional delivery in Biology teaching and learning in selected secondary schools in ILORIN WEST , Kwara State.

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APPENDIX

KWARA STATE COLLEGE OF EDUCATION

EFFECT OF INSTRUCTIONAL MATERIALS ON STUDENT PERFORMANCE IN BIOLOGY SCIENCE IN SOME SELECTED SCHOOLS IN ILORIN WEST KWARA STATE

Dear Respondents,

The researcher is a undergraduate Student in the Department of Biology in Kwara State College Of Education

. I am carrying out a research work title: Effect of Instructional Materials on Student Performance in Biology Science in Some Selected Schools in Ilorin West Kwara State

All information supplied shall be treated with utmost confidentiality.

Thanks

Yours faithfully,

The Researcher

SECTION A

PERSONAL DATA

Please kindly tick ( ) the appropriate answer in the space provided below:

1. Class Taught: (a) SS I ( ) (b) SS II ( ) (c) SS II ( )
2. Sex: (a) male ( ) (b) female ( )
3. Qualification (a) B.ED ( ) (b) B.SC (ED) ( )
4. Teaching Experience (a) 0-5 years ( ) (b) 6-10 ( ) (c) 10 years above ( )

SECTION B

Instruction: Please respond to the questionnaire as honest as possible by ticking (√) the suitable answer as applicable to you.

Use the key below.

SA- Strongly Agreed, A- Agreed, SD- Strongly disagreed, D- Disagreed.

S/N	ITEMS/ STATEMENTS	SA	A	SD	D
	Availability and Usage of Instructional Material				
1.	The school provides adequate and relevant materials for teaching of Biology				
2.	Instructional materials such as; chalkboard, bulletin board available.				
3.	There are resources centers in the school which support the use of materials for teaching, learning processes.				
4.	Most instructional materials for effective available in the school were obsolete and not relevant in teaching of Biology.				
5.	Uses of instructional materials for effective provide effective focus for students in Biology.				
6.	Most instructional materials for effective available were not properly utilized by teachers in the school.				
	Accessibility of Instructional material				
7.	Instructional materials for effective provided by the schools were constantly accessed and utilized by Biology teachers.				
8.	Teachers' lack the skill to use the available instructional material.				

9.	Lack of awareness on the availability of instructional materials for effective prevents their usage for instructional purposes in Biology.				
10.	Teachers become more effective when they use appropriate materials.				
11.	Flexibility of instructional material promotes teacher's access and utilization.				
12.	Accessibility and utilization of instructional material encourage student to offer the subject and make lesson delivery easier.				
	Challenges in utilizing instructional materials for effective				
13.	Teachers do not have basic knowledge and skill for effective utilization of the laboratory facilities.				
14.	Time has always been a major constraint in the utilization of laboratory facilities.				
15.	Poor funding for the maintenance and acquiring more up-to-date equipment.				
16.	Lack of accurate statistical data on available instructional material creates some challenges to level of utilization.				
17.	Most instructional materials for effective available are obsolete.				
18.	Lack of building and other support facilities for the use of instructional materials for effective make learning difficult.				