

Availability and Utilization of Instructional Materials in Teaching and Learning of Biology in Senior Secondary Schools

Akilu Isma'il ^{1*} , Olatunbosun Mujidat Lukman ¹ 

¹Department of Science Education, Federal University Gossa, Gossa, NIGERIA
*Corresponding Author: akilu@fugossa.edu.ng

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ABSTRACT

This study investigated the availability and utilization of instructional materials in the teaching and learning of biology in senior secondary schools in Talata Mafara Town, Zamfara State. A descriptive survey research design was adopted for the study using quantitative data. The population comprised all the heads of department of biology in the senior secondary schools (six public and four private) in Talata Mafara Town. The entire population constituted the sample of the study due to its small size. A validated questionnaire with reliability index of 0.63 obtained using Cronbach's alpha was used as instrument for data collection. The data collected were analyzed using frequency counts and percentages presented in tables and charts. Five research questions guided the study. The findings of the study revealed that some of the required instructional materials are fairly available but are not regularly use by biology teachers. Biology laboratories and instructional materials relating to multimedia are lacking in most of the schools in Talata Mafara Town. Lack of fund for procurement and large class size coupled with lack of in-service training for serving biology teachers were major factors identified to inhibit effective provision and utilization of instructional materials respectively. Based on these findings, the study recommended among others that biology teachers in Talata Mafara Town should make effort in utilizing available instructional materials. Zamfara State Government should build biology laboratories and make provision for instructional materials especially multimedia related in all senior secondary schools in Talata Mafara. Professional development of biology teachers should be encouraged and sponsored by government and other relevant stake holders.

Keywords: instructional materials, availability, utilization, teaching/learning biology

INTRODUCTION

No country can afford to disregard science at any level of education due to its impact on national development. At the senior secondary school level, biology is one of the key science subjects required in senior secondary school certificate examination (SSCE) (Ogbuze & Okoli, 2020; Umar, 2011; Umar et al., 2020). Biology is a science subject that aims at equipping students with appropriate scientific attitude, competences, and ability to apply scientific knowledge to every challenges of life. The objective of biology curriculum at secondary school level is to inculcate scientific process and attitudes in students.

The objective is highlighted by Nigerian Educational Research and Development Council (NERDC, 2008) that objectives of secondary school biology curriculum is designed to enable students acquire suitable laboratory and field skills, meaningful and relevant knowledge in biology, scientific knowledge that is applicable, in health, agriculture, personal and community daily life matters and development of

functional scientific attitudes. Several topics in biology such as ecology, cell theory, metabolism, osmosis, and so on, require approaches promoting experimental problem-solving and process-based skills (Jeronen et al., 2017). According to Ogbuze and Okoli (2020), nearly all science and arts students choose biology as they enroll for senior secondary class. Reason being that biology serves as a prerequisite subject for many fields of study (Adesola et al., 2022) and professions such as medicine, nursing, pharmacy, microbiology, biomedical technology, biochemistry, and other related disciplines. Thus, it contributes immensely to the national development. Also, Matazu (2022) stressed that biology is a very important subject for technological development. The subject is fundamental for individual well-being, development of good living environment and acquisition of functional scientific attitudes. It is therefore imperative that secondary school students are well-grounded in biology for Nigeria to attain the state of national development it desires (Nahu et al., 2021).

However, in spite of the relevance of biology, the manner of teaching and learning of the subject as well as the students'

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Table of Contents Instructional Materials Availability And Utilization

1. Understanding the eBook Instructional Materials Availability And Utilization
 - The Rise of Digital Reading Instructional Materials Availability And Utilization
 - Advantages of eBooks Over Traditional Books
2. Identifying Instructional Materials Availability And Utilization
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Instructional Materials Availability And Utilization
 - User-Friendly Interface
4. Exploring eBook Recommendations from Instructional Materials Availability And Utilization
 - Personalized Recommendations
 - Instructional Materials Availability And Utilization User Reviews and Ratings
 - Instructional Materials Availability And Utilization and Bestseller Lists
5. Accessing Instructional Materials Availability And Utilization Free and Paid eBooks
 - Instructional Materials Availability And Utilization Public Domain eBooks
 - Instructional Materials Availability And Utilization eBook Subscription Services
 - Instructional Materials Availability And Utilization Budget-Friendly Options

6. Navigating Instructional Materials Availability And Utilization eBook Formats
 - ePub, PDF, MOBI, and More
 - Instructional Materials Availability And Utilization Compatibility with Devices
 - Instructional Materials Availability And Utilization Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Instructional Materials Availability And Utilization
 - Highlighting and Note-Taking Instructional Materials Availability And Utilization
 - Interactive Elements Instructional Materials Availability And Utilization
8. Staying Engaged with Instructional Materials Availability And Utilization
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Instructional Materials Availability And Utilization
9. Balancing eBooks and Physical Books Instructional Materials Availability And Utilization
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Instructional Materials Availability And Utilization
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Instructional Materials Availability And Utilization
 - Setting Reading Goals Instructional Materials Availability And Utilization
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Instructional Materials Availability And Utilization
 - Fact-Checking eBook Content of Instructional Materials Availability And Utilization
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
 - Integration of Multimedia Elements

- Interactive and Gamified eBooks

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