

AVAILABILITY OF MICROSCOPES AND STUDENTS' PRACTICAL SKILLS

BY

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DEGREE IN SCIENCE EDUCATION

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Availability of Microscopes and Students' Practical Skills" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

PROJECT SUPERVISOR

Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study examined availability of microscopes and students' practical skills, using undergraduate students of the University of Lagos as a case study. The study was guided by three specific objectives: to examine the extent to which respondents exhibit the key attributes of availability; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with availability and microscopes. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 401 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 369 questionnaires were found valid for analysis. Data were analysed using descriptive statistics, including frequency counts, percentages, and weighted mean scores, and inferential statistics, including the Pearson Product Moment Correlation Coefficient, the Independent Samples t-test, and the chi-square test, at a 0.05 level of significance. The findings revealed that respondents exhibit the identified attributes to a considerable extent (grand mean = 2.99). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.582$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 8.58, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.21$, $p > 0.05$). The major challenges identified include inadequate awareness, weak institutional support, infrastructural constraints, and limited access to information. The study recommends targeted interventions, improved access to resources, and intensified public education on availability.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of availability of microscopes and students' practical skills is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

The salience of availability in national discourse has grown steadily, driven by changing social conditions and technological penetration. The socio-cultural diversity of Nigeria implies that responses to availability must be differentiated rather than uniform. Comparative work by Adeniyi and Musa (2022) across several states uncovered a consistent pattern linking availability with microscopes. Accordingly, there is a growing consensus that deliberate policy action is required. Studies conducted within the West African subregion by Adeniyi and Adigun (2018) reached conclusions broadly consistent with the Nigerian evidence. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

availability continues to command considerable attention among researchers, policymakers, and practitioners in science education. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which availability unfolds. A notable study by Bello and Osinachi (2017) argued that the impact of availability is substantially mediated by the quality of institutions. These observations collectively invite a reconsideration of standard assumptions regarding microscopes. An examination by Oyelaran and Osinachi (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

availability continues to command considerable attention among researchers, policymakers, and practitioners in science education. Within Lagos State, the country's most populous commercial hub, the dynamics of availability are observed in their starkest form. An examination by Oyelaran and Osinachi (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Evidence assembled by Famuyide and Nnamdi (2015) across twelve states underscored the heterogeneity of outcomes linked to availability. Accordingly, there is a growing consensus that deliberate policy action is required. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

Over the past two decades, availability has become increasingly significant within the Nigerian landscape and beyond. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which availability unfolds. Longitudinal research by Okonkwo and