

AVAILABILITY OF REAGENTS AND CHEMISTRY PRACTICAL LESSONS

BY

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DEGREE IN SCIENCE EDUCATION

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Availability of Reagents and Chemistry Practical Lessons" 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 reagents and chemistry practical lessons, 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 reagents. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 400 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 389 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 = 2.98). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.516$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 9.17, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.32$, $p > 0.05$). 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 reagents and chemistry practical lessons 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.

A growing corpus of literature draws attention to the pivotal role of availability in shaping developmental trajectories. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which availability unfolds. The aggregate picture emerging from Adigun and Umeh (2023) points to a modest but consistent association between availability and the outcomes of interest. Such findings reinforce the argument that availability deserves a place of priority on the development agenda. Empirical evidence from Chukwu and Famuyide (2021) suggests that positive developments in reagents are associated with improvements in availability. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

Over the past two decades, availability has become increasingly significant within the Nigerian landscape and beyond. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of availability. Alade and Adigun (2020), in a survey of relevant stakeholders, concluded that the benefits of availability are unevenly distributed across groups. Such findings reinforce the argument that availability deserves a place of priority on the development agenda. Evidence assembled by Adigun and Olawale (2015) across twelve states underscored the heterogeneity of outcomes linked to availability. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

Scholars have long recognised availability as a critical determinant of outcomes in science education. National policies and programmes have sought, with varying degrees of success, to respond to the realities of availability and reagents. The work of Adigun and Olawale (2023) extended earlier analyses by demonstrating that reagents reinforces the effects of availability. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. The aggregate picture emerging from Salami and Ogbeide (2023) points to a modest but consistent association between availability and the outcomes of interest. For practitioners, the practical significance of availability cannot be overstated, given its demonstrable link with reagents. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Few subjects attract as much policy interest in contemporary Nigeria as the question of availability. Evidence from national agencies indicates that availability has grown considerably in recent times, underscoring the need for systematic inquiry. Findings reported by Eze and Osinachi (2018) observed that respondents with