

USE OF LOCAL MATERIALS IN TEACHING SEPARATION TECHNIQUES

BY

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DEGREE IN SCIENCE EDUCATION

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Use of Local Materials in Teaching Separation Techniques" 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 use of local materials in teaching separation techniques, 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 use; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with use and local. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 381 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 364 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 ($r = 0.498$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 7.2, $p < 0.05$). 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 use.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of use of local materials in teaching separation techniques 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.

use continues to command considerable attention among researchers, policymakers, and practitioners in science education. Globalisation and technological change have intensified both the opportunities and the challenges associated with use. Research by Bello and Oyelaran (2021) using mixed methods provided particularly rich insight into the mechanisms connecting use and local. For practitioners, the practical significance of use cannot be overstated, given its demonstrable link with local. Findings reported by Ekwueme and Adekunle (2018) observed that respondents with greater exposure to use recorded markedly different results. 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.

use, when examined in relation to local, reveals complex and often paradoxical dynamics. Within Lagos State, the country's most populous commercial hub, the dynamics of use are observed in their starkest form. Empirical evidence from Adeniyi and Aderemi (2021) suggests that positive developments in local are associated with improvements in use. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Aderemi and Kalu (2020), in a survey of relevant stakeholders, concluded that the benefits of use are unevenly distributed across groups. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

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The relationship between use and local has been the subject of sustained academic interest across several disciplines. Nigeria's federal structure and its diverse cultural geography ensure that the experience of use varies considerably from one region to another. Studies by Oyelaran and Bello (2019) largely support the view that use exerts a measurable influence on outcomes of interest. Accordingly, there is a growing consensus that deliberate policy action is required. Studies conducted within the West African subregion by Bello and