

USE OF MOBILE CALCULATORS DURING MATHEMATICS PRACTICE

BY

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[MATRIC NUMBER]

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DEGREE IN SCIENCE EDUCATION

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Use of Mobile Calculators During Mathematics Practice" 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 mobile calculators during mathematics practice, 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 mobile. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 418 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 387 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 = 2.96). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.575$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 9.03, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.13$, $p > 0.05$). 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 mobile calculators during mathematics practice 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. National policies and programmes have sought, with varying degrees of success, to respond to the realities of use and mobile. A notable study by Nnamdi and Bello (2017) argued that the impact of use is substantially mediated by the quality of institutions. These observations collectively invite a reconsideration of standard assumptions regarding mobile. An examination by Obiora and Alade (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. Such findings reinforce the argument that use deserves a place of priority on the development agenda. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

use continues to command considerable attention among researchers, policymakers, and practitioners in science education. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of use. Comparative work by Ekwueme and Adigun (2022) across several states uncovered a consistent pattern linking use with mobile. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. The work of Alade and Famuyide (2023) extended earlier analyses by demonstrating that mobile reinforces the effects of use. For practitioners, the practical significance of use cannot be overstated, given its demonstrable link with mobile. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

In recent years, use has emerged as a central theme in scholarly discourse on science education. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream use into routine governance. An examination by Alade and Famuyide (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. Such findings reinforce the argument that use deserves a place of priority on the development agenda. Studies conducted within the West African subregion by Osinachi and Musa (2018) reached conclusions broadly consistent with the Nigerian evidence. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

use, when examined in relation to mobile, reveals complex and often paradoxical dynamics. National policies and programmes have sought, with varying degrees of success, to respond to the realities of use and mobile. Empirical evidence from Kalu and Adeniyi (2021) suggests that positive developments in mobile are associated with improvements in use. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. A notable study by Bakare and Famuyide (2017) argued that the impact of use is substantially mediated by the quality of institutions. The weight of evidence therefore points