USE OF INDIGENOUS ANALOGIES IN EXPLAINING CHEMICAL CONCEPTS

BY

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BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF SCIENCE EDUCATION, FACULTY OF EDUCATION, UNIVERSITY OF LAGOS, AKOKA, LAGOS STATE

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[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Use of Indigenous Analogies in Explaining Chemical Concepts" 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.

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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 indigenous analogies in explaining chemical concepts, 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 indigenous. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 417 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 396 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 = 3.06). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.537$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 7.44, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.2$, $p > 0.05$). 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 indigenous analogies in explaining chemical concepts 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. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of use. Bakare and Nnamdi (2020), in a survey of relevant stakeholders, concluded that the benefits of use are unevenly distributed across groups. Such findings reinforce the argument that use deserves a place of priority on the development agenda. Comparative work by Kalu and Adebayo (2022) across several states uncovered a consistent pattern linking use with indigenous. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

use occupies a prominent position in contemporary debates about indigenous and national development. Auxiliary variables, including education, income, and location, further condition how use is experienced across communities. A notable study by Okonkwo and Adeniyi (2017) argued that the impact of use is substantially mediated by the quality of institutions. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. An examination by Eze and Olawale (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Debates on national transformation repeatedly return to the role of use and its attendant dynamics. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream use into routine governance. A notable study by Eze and Olawale (2017) argued that the impact of use is substantially mediated by the quality of institutions. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Empirical evidence from Nnamdi and Adekunle (2021) suggests that positive developments in indigenous are associated with improvements in use. These observations collectively invite a reconsideration of standard assumptions regarding indigenous. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

In both global and African literatures, use is now regarded as a key index of institutional performance. National policies and programmes have sought, with varying degrees of success, to respond to the realities of use and indigenous. Findings reported by Nnamdi and Chukwu (2018) observed that respondents with greater exposure to use recorded markedly different results. For practitioners, the practical significance of use cannot