

CLASSIFICATION OF ANIMALS USING PICTURE CHARTS

BY

[STUDENT'S FULL NAME]

[MATRIC NUMBER]

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

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B.Sc.)
DEGREE IN SCIENCE EDUCATION

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Classification of Animals Using Picture Charts" 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.

ACKNOWLEDGEMENT

My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Science Education, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

ABSTRACT

This study examined classification of animals using picture charts, 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 classification; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with classification and animals. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 390 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 362 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 = 3.04). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.59$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 8.13, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.27$, $p > 0.05$). 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 classification.

TABLE OF CONTENTS

Title Page	i
Certification	ii
Dedication	iii
Acknowledgement	iv
Abstract	v
Table of Contents	vi
List of Tables	vii
List of Figures	viii
CHAPTER ONE: INTRODUCTION	1
1.1 Background to the Study	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	7
1.4 Research Questions	7
1.5 Research Hypotheses	7
1.6 Significance of the Study	8
1.7 Scope and Limitation of the Study	11
1.8 Definition of Terms	13
CHAPTER TWO: LITERATURE REVIEW	15
2.1 Conceptual Review	15
2.1.1 Concept of Classification	15
2.1.2 Concept of Animals	16
2.1.3 Concept of Picture	18
2.2 Theoretical Framework	20
2.2.1 Constructivist Learning Theory	20
2.2.2 Technology Acceptance Model	21
2.2.3 Cognitive Load Theory	22
2.2.4 Experiential Learning Theory	23
2.3 Empirical Review	25
2.3.1 Early Studies on classification	25
2.3.2 Recent Nigerian Evidence on classification	27
2.3.3 Classification and animals	28
2.3.4 Comparative Perspectives across Africa	30
2.4 Summary of Literature Review	32
CHAPTER THREE: RESEARCH METHODOLOGY	34
3.1 Research Design	34
3.2 Population of the Study	35
3.3 Sample Size and Sampling Technique	35
3.4 Sources of Data Collection	36
3.5 Research Instrument	37
3.6 Validity and Reliability of the Instrument	38
3.7 Method of Data Analysis	39
3.7.1 Administration of the Instrument	40

3.8 Ethical Considerations	41
CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION	43
4.1 Data Presentation	43
4.2 Demographic Characteristics of Respondents	44
4.3 Analysis of Research Questions	44
4.4 Test of Hypotheses	45
4.5 Discussion of Findings	46
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	52
5.1 Summary	52
5.2 Conclusion	53
5.3 Recommendations	54
5.4 Suggestions for Further Studies	54
REFERENCES	56
APPENDIX	58

LIST OF TABLES

Table 2.1: Summary of the Review of Related Literature	33
Table 2.2: Operationalisation of the Study Variables	33
Table 3.1: Population of the Study and Sampling Technique	41
Table 3.2: Validity and Reliability of the Research Instrument	42
Table 4.1: Gender Distribution of Respondents	49
Table 4.2: Age Distribution of Respondents	49
Table 4.3: Educational Attainment of Respondents	50
Table 4.4: Weighted Mean Analysis of Research Question One	50
Table 4.5: Weighted Mean Analysis of Research Question Two	50
Table 4.6: Correlation Summary between the Independent and Dependent Variables	50
Table 4.7: Independent Samples t-test by Gender	50
Table 4.8: Chi-square Test of Association	50

LIST OF FIGURES

Figure 1.1: Conceptual Framework of the Study	14
Figure 3.1: Science Education Research Context	42
Figure 4.1: Gender Distribution of Respondents	49
Figure 4.2: Age Distribution of Respondents	49

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of classification of animals using picture charts 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.

classification, when examined in relation to animals, reveals complex and often paradoxical dynamics. Economic pressures and resource scarcity frequently determine the pace at which classification advances in practice. The aggregate picture emerging from Famuyide and Ogbeide (2023) points to a modest but consistent association between classification and the outcomes of interest. These observations collectively invite a reconsideration of standard assumptions regarding animals. Empirical evidence from Bello and Adigun (2021) suggests that positive developments in animals are associated with improvements in classification. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

Scholars have long recognised classification as a critical determinant of outcomes in science education. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which classification unfolds. Findings reported by Adebayo and Adeniyi (2018) observed that respondents with greater exposure to classification recorded markedly different results. These observations collectively invite a reconsideration of standard assumptions regarding animals. Longitudinal research by Obiora and Nwosu (2016) revealed that sustained attention to classification yields appreciable dividends over time. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

Contemporary scholarship increasingly frames classification as inseparable from the broader question of animals. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of classification. Obiora and Nwosu (2020), in a survey of relevant stakeholders, concluded that the benefits of classification are unevenly distributed across groups. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Adekunle and Bamgbose (2020), in a survey of relevant stakeholders, concluded that the benefits of classification are unevenly distributed across groups. Such findings reinforce the argument that classification deserves a place of priority on the development agenda. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

classification occupies a prominent position in contemporary debates about animals and national development. Globalisation and technological change have intensified both the opportunities and the challenges associated with classification. Empirical evidence from Nnamdi and Adekunle (2021) suggests that positive