

STUDENTS' ATTITUDE TO SCIENCE PRACTICALS

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 "Students' Attitude to Science Practicals" 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 students' attitude to science practicals, 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 students; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with students and attitude. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 408 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 = 3.1). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.578$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 7.33, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.07$, $p > 0.05$). 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 students.

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	7
1.7 Scope and Limitation of the Study	10
1.8 Definition of Terms	12
CHAPTER TWO: LITERATURE REVIEW	14
2.1 Conceptual Review	14
2.1.1 Concept of Students	14
2.1.2 Concept of Attitude	15
2.1.3 Concept of Science	17
2.2 Theoretical Framework	19
2.2.1 Constructivist Learning Theory	19
2.2.2 Technology Acceptance Model	20
2.2.3 Cognitive Load Theory	21
2.2.4 Experiential Learning Theory	22
2.3 Empirical Review	23
2.3.1 Early Studies on students	24
2.3.2 Recent Nigerian Evidence on students	25
2.3.3 Students and attitude	27
2.3.4 Comparative Perspectives across Africa	29
2.4 Summary of Literature Review	31
CHAPTER THREE: RESEARCH METHODOLOGY	33
3.1 Research Design	33
3.2 Population of the Study	33
3.3 Sample Size and Sampling Technique	34
3.4 Sources of Data Collection	35
3.5 Research Instrument	36
3.6 Validity and Reliability of the Instrument	37
3.7 Method of Data Analysis	38
3.7.1 Administration of the Instrument	39

3.8 Ethical Considerations	39
CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION	42
4.1 Data Presentation	42
4.2 Demographic Characteristics of Respondents	42
4.3 Analysis of Research Questions	43
4.4 Test of Hypotheses	44
4.5 Discussion of Findings	45
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	50
5.1 Summary	50
5.2 Conclusion	51
5.3 Recommendations	52
5.4 Suggestions for Further Studies	52
REFERENCES	54
APPENDIX	56

LIST OF TABLES

Table 2.1: Summary of the Review of Related Literature	31
Table 2.2: Operationalisation of the Study Variables	31
Table 3.1: Population of the Study and Sampling Technique	40
Table 3.2: Validity and Reliability of the Research Instrument	40
Table 4.1: Gender Distribution of Respondents	48
Table 4.2: Age Distribution of Respondents	48
Table 4.3: Educational Attainment of Respondents	48
Table 4.4: Weighted Mean Analysis of Research Question One	49
Table 4.5: Weighted Mean Analysis of Research Question Two	49
Table 4.6: Correlation Summary between the Independent and Dependent Variables	49
Table 4.7: Independent Samples t-test by Gender	49
Table 4.8: Chi-square Test of Association	49

LIST OF FIGURES

Figure 1.1: Conceptual Framework of the Study	13
Figure 3.1: Science Education Research Context	41
Figure 4.1: Gender Distribution of Respondents	48
Figure 4.2: Age Distribution of Respondents	48

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of students' attitude to science practicals 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.

Students occupy a prominent position in contemporary debates about attitude and national development. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which students unfold. An examination by Umeh and Ekwueme (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. Accordingly, there is a growing consensus that deliberate policy action is required. Empirical evidence from Famuyide and Adekunle (2021) suggests that positive developments in attitude are associated with improvements in students. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of $\{k_0\}$ from confounding factors.

Few subjects attract as much policy interest in contemporary Nigeria as the question of students. The socio-cultural diversity of Nigeria implies that responses to students must be differentiated rather than uniform. Research by Famuyide and Musa (2021) using mixed methods provided particularly rich insight into the mechanisms connecting students and attitude. Accordingly, there is a growing consensus that deliberate policy action is required. Findings reported by Adekunle and Ogbeide (2018) observed that respondents with greater exposure to students recorded markedly different results. For practitioners, the practical significance of students cannot be overstated, given its demonstrable link with attitude. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

The salience of students in national discourse has grown steadily, driven by changing social conditions and technological penetration. Auxiliary variables, including education, income, and location, further condition how students is experienced across communities. Studies conducted within the West African subregion by Adekunle and Ogbeide (2018) reached conclusions broadly consistent with the Nigerian evidence. Such findings reinforce the argument that students deserves a place of priority on the development agenda. The aggregate picture emerging from Umeh and Alade (2023) points to a modest but consistent association between students and the outcomes of interest. Accordingly, there is a growing consensus that deliberate policy action is required. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Contemporary scholarship increasingly frames students as inseparable from the broader question of attitude. The socio-cultural diversity of Nigeria implies that responses to students must be differentiated rather than uniform. Studies conducted within the West African subregion by Alade and Obiora (2018) reached conclusions broadly consistent with the Nigerian evidence. The practical import of these findings extends well