

GROUPING OF OBJECTS BY COLOUR AND SHAPE

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 "Grouping of Objects by Colour and Shape" 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 grouping of objects by colour and shape, 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 grouping; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with grouping and objects. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 410 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 376 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 ($r = 0.506$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 9.31, $p < 0.05$). 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 grouping.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of grouping of objects by colour and shape 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.

Contemporary scholarship increasingly frames grouping as inseparable from the broader question of objects. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which grouping unfolds. Longitudinal research by Ogunlana and Adeniyi (2016) revealed that sustained attention to grouping yields appreciable dividends over time. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Research by Ekwueme and Adigun (2021) using mixed methods provided particularly rich insight into the mechanisms connecting grouping and objects. 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.

grouping continues to command considerable attention among researchers, policymakers, and practitioners in science education. Within Lagos State, the country's most populous commercial hub, the dynamics of grouping are observed in their starkest form. Famuyide and Chukwu (2020), in a survey of relevant stakeholders, concluded that the benefits of grouping are unevenly distributed across groups. For practitioners, the practical significance of grouping cannot be overstated, given its demonstrable link with objects. Findings reported by Dauda and Bello (2018) observed that respondents with greater exposure to grouping 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.

grouping occupies a prominent position in contemporary debates about objects and national development. The socio-cultural diversity of Nigeria implies that responses to grouping must be differentiated rather than uniform. Dauda and Bello (2020), in a survey of relevant stakeholders, concluded that the benefits of grouping are unevenly distributed across groups. These observations collectively invite a reconsideration of standard assumptions regarding objects. Ogbeide and Adeniyi (2020), in a survey of relevant stakeholders, concluded that the benefits of grouping are unevenly distributed across groups. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

grouping occupies a prominent position in contemporary debates about objects and national development. Globalisation and technological change have intensified both the opportunities and the challenges associated with grouping. The aggregate picture emerging from Okonkwo and Oyelaran (2023) points to a modest but consistent association between grouping and the outcomes of interest. The cumulative effect of these dynamics