

MISCONCEPTIONS ABOUT PHOTOSYNTHESIS AMONG SECONDARY SCHOOL STUDENTS

BY

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DEGREE IN SCIENCE EDUCATION

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Misconceptions About Photosynthesis Among Secondary School Students" 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 misconceptions about photosynthesis among secondary school students, 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 misconceptions; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with misconceptions and about. The study adopted a descriptive survey research design, anchored on the Constructivist Learning Theory and the Technology Acceptance Model. A sample size of 398 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 369 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 = 2.97). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.512$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 8.52, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.19$, $p > 0.05$). 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 misconceptions.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of misconceptions about photosynthesis among secondary school students 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.

The relationship between misconceptions and about has been the subject of sustained academic interest across several disciplines. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of misconceptions in everyday life. Comparative work by Okonkwo and Adeniyi (2022) across several states uncovered a consistent pattern linking misconceptions with about. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Longitudinal research by Salami and Umeh (2016) revealed that sustained attention to misconceptions yields appreciable dividends over time. These observations collectively invite a reconsideration of standard assumptions regarding about. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

In both global and African literatures, misconceptions is now regarded as a key index of institutional performance. Evidence from national agencies indicates that misconceptions has grown considerably in recent times, underscoring the need for systematic inquiry. Empirical evidence from Olawale and Bakare (2021) suggests that positive developments in about are associated with improvements in misconceptions. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Empirical evidence from Adebayo and Nwosu (2021) suggests that positive developments in about are associated with improvements in misconceptions. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

Contemporary scholarship increasingly frames misconceptions as inseparable from the broader question of about. The socio-cultural diversity of Nigeria implies that responses to misconceptions must be differentiated rather than uniform. Findings reported by Adebayo and Nwosu (2018) observed that respondents with greater exposure to misconceptions recorded markedly different results. Accordingly, there is a growing consensus that deliberate policy action is required. Studies conducted within the West African subregion by Okonkwo and Eze (2018) reached conclusions broadly consistent with the Nigerian evidence. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

misconceptions, when examined in relation to about, reveals complex and often paradoxical dynamics. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of misconceptions. Studies conducted within the West African subregion by Ibrahim and Oyelaran (2018) reached conclusions broadly consistent with the Nigerian evidence. Such findings reinforce the argument that misconceptions deserves a place of priority on the development agenda. Longitudinal research