

**IMPACT OF SCHEDULING AND TIMETABLE CLASHES ON
THE ACADEMIC PERFORMANCE OF INTEGRATED SCIENCE
STUDENTS**

BY

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CERTIFICATION

We the undersigned hereby certify that this research work carried out by Joshua Taiwo ASHADE in the Department of Curriculum and Instructional Technology, Faculty of Education, University of Benin, Benin city.

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DEDICATION

This project is dedicated to God Almighty for his unfailing care and provision in the process of writing this project.

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The researcher is grateful to God for his immense love and provision throughout the period of this research.

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TABLE OF CONTENTS

	PAGE
TITLE PAGE	i
CERTIFICATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
ABSTRACT	viii
CHAPTER ONE: INTRODUCTION	
Background of the Study	1
Statement of the Problem	6
Research Questions	8
Significance of the Study	9
Purpose of the Study	10
Scope of the Study	11
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
Theoretical Framework	13
Conceptual Framework	22

Concept of Integrated Science	22
Concept of Timetabling and Scheduling	30
Concept of Timetable Clashes	38
Concept of Academic Performance	46
Empirical Review	54
Summary of Literature	60
CHAPTER THREE: METHODOLOGY	
Design of the Study	65
Population of the Study	66
Sample and Sampling Technique	67
Research Instrument	67
Validity of Research Instrument	68
Reliability of the Research Instrument	68
Method of Data Collection	68
Method of Data Analysis	69

CHAPTER FOUR

Presentation of Data	70
Discussion of Findings	78

CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATION

Summary	81
Findings	83
Conclusion	85
Recommendations	86
Contribution to Knowledge	87
Suggestions for Further Studies	88
REFERENCES	90
APPENDIX I	92

ABSTRACT

The study investigated the impact of scheduling and timetable clashes on academic performance of integrated science students. Five research questions were raised to guide the study. Descriptive survey research design was adopted by the study.

The population of the study comprised of all science education students in of the selected university. Specifically, the study focused on 150 students in integrated science, chemistry education, and biology education. They were selected from the population using the stratified random sampling technique. The questionnaire was the instrument used for data collection. The validity of the instrument was validated by the researcher's supervisor. The data collected were analyzed using descriptive statistical methods, frequency counts at 0.05 level of significance. The result of the reliability test yielded a Cronbach Alpha coefficient of 0.84, which indicates a high level of internal consistency of the instrument.

The study found that many students experience timetable clashes, including lecture overlaps and scheduling conflicts, during their academic

activities. It also revealed that timetable clashes vary across academic levels, with students in higher levels (especially 300 and 400 levels) facing more scheduling challenges due to heavier workloads and course combinations. Furthermore, Integrated Science students were found to experience more timetable-related problems because they take courses from multiple science departments, affecting both male and female students. Based on the findings, the study recommends that university management adopt effective timetable planning, computerized scheduling systems, and balanced academic schedules while encouraging students to develop time-management skills in order to reduce timetable clashes, minimize stress, and improve academic performance.

CHAPTER ONE

INTRODUCTION

Background of the Study

Timetabling is a fundamental administrative activity in educational institutions because it determines how time is allocated to different school activities both academic and non academic. According to Olaifa et al. (2025), “The process of timetabling is the process of scheduling time to academic and non academic activities and it's an important aspect of managing the school. It directly influences the students' learning outcomes, teacher productivity and the overall institutional effectiveness.” This explains that timetabling goes beyond just arranging classes on paper. It plays a crucial role in how students learn, how teachers perform their duties, and how effective an institution becomes. When timetables are poorly arranged, students may miss lectures or struggle to keep up academically and teachers may find it difficult to deliver lessons effectively. This makes timetabling an important factor in achieving educational goals.

Motamedi and Khajouie (2020) described timetabling as “the systematic distribution of time for diverse academic and nonacademic activities within the

school schedule, is an essential aspect of educational management that significantly impacts student learning outcomes, teacher productivity, and overall school performance.” This highlights that timetabling must be systematic and well structured. When time is not properly distributed, academic activities may clash, leading to confusion and reduced learning effectiveness. Proper scheduling helps ensure that both academic and non-academic activities run smoothly, creating an environment that endorses effective teaching and learning.

Effective timetabling requires deliberate effort and planning. Franklin and Harrington (2019) assert that “effective timetabling requires careful planning and organization to maximize resources and facilitate the seamless operation of all school activities.” This means that timetabling cannot just be done casually without proper consideration. Educational institutions must carefully plan how classrooms, teachers, and time are being used. Without proper planning, resources may be wasted, and both students and teachers may experience unnecessary stress. Careful organization and scheduling helps to reduce scheduling conflicts and supports smooth operations of academic activities.

Research has also shown that timetabling influences students' academic success. According to Baleke (2023), "effective and organized timetabling can increase student engagement, foster instructional coherence and enhance academic performance." The effect of timetabling becomes more evident when student academic performance is considered, especially in programmes with diverse academic demands. As earlier noted by Baleke (2023), "effective and organized timetabling can increase student engagement, foster instructional coherence and enhance academic performance." This statement clearly explains that the way academic activities are scheduled can either support or hinder students' learning process. When timetables are well organized, students are able to attend lectures consistently, follow lessons without being tired, and manage their study time better. However, when timetables are poorly arranged, students may struggle to cope academically, which can negatively affect their academic performance.

This challenge is particularly relevant to Integrated Science students in the university. Integrated Science is a multidisciplinary programme that combines courses from different science-related departments such as Mathematics, Physics, Chemistry, Animal and Environmental Biology, Plant Biology and Biotechnology. As a result of this Multidisciplinary nature,

students are required to attend lectures taught by different lecturers, in different venues, and under different departmental schedules. This makes Integrated Science students more vulnerable to scheduling problems and timetable clashes. When lectures from different departments are fixed without proper coordination, Integrated Science students may experience overlapping lecture periods. This situation forces the students to choose between two compulsory courses scheduled at the same time.

Missing lectures regularly can lead to major gaps in understanding, poor preparation for tests and examinations, and ultimately low academic performance. In such cases, students may also lose motivation and interest in certain courses due to repeated conflicts in the timetable. In addition, the heavy academic workload of the Integrated Science programmes can become overwhelming when courses are not evenly distributed. Poor scheduling may result in students having too many lectures in a day, with no break in between. This can lead to fatigue, mental stress, and reduced concentration during lectures. Over time, these factors can negatively affect students' ability to take in information and perform well academically.

Furthermore, poor scheduling may affect students' personal study time. When lectures are scattered irregularly or poorly organized, students may find

it difficult to create a stable study routine. This can reduce time available for revision, assignments, and exam preparation. As a result, academic performance may decline. Therefore, while effective timetabling supports learning and academic activities well, poor scheduling and timetable clashes pose as a serious challenges to Integrated Science students. Given the multidisciplinary nature of the programme and the number of courses taken across different departments, proper organisation and schedules is essential to support students' academic performance and overall learning experience.

Despite the recognized importance of effective timetabling in supporting teaching and learning processes, many studies have focused on general school settings without giving adequate attention to specific programmes with unique academic structures. While existing research has shown that timetabling influences student learning outcomes and academic performance, limited emphasis has been placed on how scheduling challenges and timetable clashes affect students in multidisciplinary programmes such as Integrated Science. This multidisciplinary nature of the programme increases their exposure to scheduling difficulties, such as overlapping lectures, congested timetables, and uneven distribution of academic workload. When such challenges are not addressed properly, students may miss classes, struggle to manage their time,

and experience academic stress, all of which can affect their academic performance negatively.

Given these challenges, it is necessary to examine how scheduling practices and timetable clashes specifically affect the academic performance of Integrated Science students. Understanding the effect will provide valuable insights into the academic experiences of the Integrated Science students and highlight areas where improvements in scheduling and timetable planning are needed.

This study is therefore focused on investigating the impact of scheduling and timetable clashes on the academic performance of Integrated Science students, with the aim of contributing to improve academic planning and enhanced learning outcomes within the programme.

Statement of the Problem

Effective timetabling plays a crucial role in supporting teaching, learning, and academic performance in educational institutions. Previous studies have established that well-organized schedules can enhance student engagement, improve learning outcomes, and support the overall effectiveness of the institution. Despite this recognition, challenges related to scheduling and timetable planning remains common in many educational settings. In university

environments, these challenges often manifest as timetable clashes, congested lecture schedules, uneven distribution of courses, and poor coordination across departments.

Such issues can disrupt students' academic routines, limit consistent lecture attendance and create difficulties in managing academic workload. When students are unable to attend all scheduled classes due to overlapping lectures or poorly structured timetables, their understanding of the course content and preparation for assessments may be affected negatively. These challenges are particularly pronounced among Integrated Science students due to the multidisciplinary nature of their programme. Integrated Science students are required to take courses from different departments such as Mathematics, Physics, Chemistry, Animal and Environmental Biology, and Plant Biology and Biotechnology.

The involvement of multiple departments increases the likelihood of scheduling conflicts, especially when the courses are planned independently without adequate coordination. As a result, students may experience frequent timetable clashes involving compulsory courses, leading to missed lectures, academic stress, and reduced learning effectiveness. Despite this complexity within the Integrated Science programme, there are limited works that

specifically examines how scheduling practices and timetable clashes affect the academic performance of Integrated Science students. Most existing studies have focused on general student populations or administrative aspects of timetabling without talking about how it affects the academic performance of multidisciplinary programmes.

This gap creates a need for focused research that examines the impact of scheduling and timetable clashes on the academic performance of Integrated Science students. Understanding this relationship is important for identifying scheduling challenges, improving timetable planning, and enhancing the academic outcomes within the Integrated Science programme.

Research Questions

1. What is the proportion of students who experience timetable clashes?
2. Do timetable clashes differ across the different levels of Integrated Science students?
3. Do timetable clashes differ across the different subject areas among science education students?
4. Do timetable clashes affect the academic performance of male and female science education students differently?

5. Is there a difference in the academic performance of Integrated Science, chemistry and biology students?

Significance of the Study

This study is significant in several ways as it focuses on the impact of scheduling and timetable clashes on the academic performance of Integrated Science students. It will also be beneficial to the following stakeholders such as lecturers, timetable and administration officers, school management etc.

Firstly, the findings of this study will be beneficial to Integrated Science students. By identifying how scheduling issues and timetable clashes affect their academic performance. This study will help students understand the challenges associated with their multidisciplinary programme. This awareness may encourage the students to manage their time more effectively and seek academic support when scheduling challenges interfere with their learning.

Secondly, the study will be useful to lecturers and course coordinators involved in teaching Integrated Science courses. Understanding the challenges of how timetable clashes and congested schedules affect students' learning and performance can help the lecturers become more mindful of scheduling demands placed on students. This may encourage better coordination among departments when planning lectures and practical sessions.

Thirdly, the study will be of importance to administrators and timetable planners. The findings will provide useful information on the scheduling challenges faced by Integrated Science students, particularly those arising from the involvement of multiple departments. This can help administrators improve timetable planning, reduce clashes, and ensure a more balanced distribution of academic activities, which may enhance students' academic performance.

In addition, the study will also contribute to the existing body of knowledge in educational management and planning. While previous studies have examined timetabling in general educational settings, this study provides specific insights into the experiences of Integrated Science students in a university context. It therefore sheds light on timetable-related challenges in multidisciplinary academic programmes.

Finally, the study can serve as a reference material for future researchers who may wish to conduct further studies on scheduling, timetabling, or academic performance in science-based or multidisciplinary programmes.

Purpose of the Study

The purpose of this study is to:

- examine the impact of scheduling and timetable clashes on the academic performance of Integrated Science students.

- examine how timetable clashes affect the motivation of Integrated Science students.
- determine whether timetable clashes differ across the various levels of Integrated Science students.
- examine whether timetable clashes affect the academic performance of male and female Integrated Science students differently.
- investigate how improper timetable schedules affect the academic performance of Integrated Science students.
- examine if there are differences in the academic performance of Integrated Science, chemistry and biology students?

Scope of the Study

This study focuses on the impact of scheduling and timetable clashes on the academic performance of Integrated Science students. The study is specific to Integrated Science students in a university setting and does not include students from other academic programmes.

The scope of the study covers issues related to scheduling, timetable clashes, and improper timetable arrangements as they affect students' academic performance and motivation. It also considers differences in timetable clashes across students' levels of study and gender.

The study is confined to Integrated Science programmes in the university settings and the findings may not be generalized to all academic programmes. The study relies on data collected from Integrated Science students through the use of a questionnaire, and the analysis is limited to the responses obtained from the sampled students.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter presents the review of related literature and it is organized into the following sub headings,

- Theoretical Framework
- Conceptual Framework
- Concept of Integrated Science
- Concept of Timetabling and Scheduling
- Concept of Timetable Clashes
- Concept of Academic Performance
- Empirical Review
- Summary of Literature

Theoretical Framework

Theory of Time Management

Time Management Theory is one of the most relevant theoretical perspectives in educational management and academic productivity studies because it explains how the effective organization, planning, and utilization of time influence individual performance, efficiency, and achievement.

The theory is built on the assumption that time is a limited and valuable resource that must be properly allocated in order to achieve specific goals and objectives. Within educational institutions, effective time management is regarded as an essential factor influencing students' academic performance, lecturers' productivity, and institutional effectiveness.

The concept of time management emerged from organizational and behavioural studies that examined how individuals utilize time in relation to productivity and goal attainment. Over the years, scholars have emphasized that successful individuals and institutions are often distinguished by their ability to manage time effectively. In educational settings particularly, time management plays a critical role because academic activities such as lectures, practical sessions, assignments, examinations, seminars, and personal study must all be coordinated within limited time periods.

Time Management Theory therefore explains that individuals who plan, organize, and utilize their time effectively are more likely to achieve better outcomes than those who fail to coordinate their activities properly. The theory further suggests that poor time management often results in stress, confusion, reduced productivity, and poor performance.

According to Alonge and Ogeleka (2022), time management refers to the deliberate process of planning and controlling how time is spent on specific activities in order to improve effectiveness and productivity.

Their explanation emphasizes that effective time management enables students to balance academic responsibilities successfully while minimizing unnecessary pressure and distractions.

Similarly, Ogunode and Ibrahim (2021) argued that time management involves the strategic allocation of time resources toward activities capable of promoting academic achievement and personal productivity. This perspective highlights the importance of planning, prioritization, and discipline in achieving educational success.

The theory of time management is particularly relevant within the educational system because learning activities are highly time-dependent. Academic institutions operate within structured schedules where lectures, practical sessions, examinations, and academic deadlines are fixed within specific periods. Consequently, both students and lecturers must organize their activities carefully in order to meet academic expectations.

One of the central assumptions of Time Management Theory is that proper scheduling enhances productivity and efficiency. Students who organize

their study periods effectively are more likely to complete assignments on time, attend lectures regularly, and prepare adequately for examinations. In contrast, students with poor time management habits often experience procrastination, stress, incomplete academic tasks, and poor learning outcomes.

Research conducted among Nigerian undergraduates has consistently shown that effective time management contributes positively to academic performance. Adeyemi and Salami (2022) observed that students who maintain organized study schedules generally perform better academically than students who lack structured academic planning. Their findings revealed that time management promotes concentration, discipline, and academic consistency among learners.

Time Management Theory is also closely associated with the principle of prioritization. The theory suggests that individuals should identify important activities and allocate sufficient time to them according to their level of importance. In educational settings, students are expected to prioritize lectures, assignments, practical activities, and independent study over less productive engagements. Effective prioritization therefore enables students to maximize academic productivity within limited time frames.

Within the context of higher education, time management becomes increasingly important because university students often handle multiple academic responsibilities simultaneously. Students are expected to combine classroom activities, assignments, practical sessions, research projects, examinations, and extracurricular engagements within a structured academic calendar. Failure to manage these responsibilities effectively may result in academic difficulties and psychological pressure.

The relevance of Time Management Theory becomes more pronounced in multidisciplinary programmes such as Integrated Science. Integrated Science students usually combine courses from different departments including Biology, Chemistry, Physics, Mathematics, and Environmental Science. This broad academic structure exposes students to heavy workloads, multiple practical sessions, laboratory activities, and interdepartmental lecture schedules.

As a result, Integrated Science students require effective time management in order to balance their academic responsibilities successfully. However, when institutional schedules are poorly coordinated or timetable clashes occur, students' ability to manage time effectively becomes disrupted. Lecture overlaps, conflicting practical sessions, and congested schedules often interfere with students' academic planning and reduce learning effectiveness.

According to Baleke (2023), organized timetabling enhances instructional coherence and improves students' academic engagement. This finding supports the assumptions of Time Management Theory because effective scheduling creates an environment where students can utilize time productively and participate fully in academic activities.

Time Management Theory also explains the relationship between scheduling challenges and academic stress. Students exposed to poor scheduling arrangements often struggle to allocate time appropriately among competing academic activities. This situation may lead to exhaustion, frustration, anxiety, and reduced concentration.

Adebayo and Ogunode (2022) found that academic stress among Nigerian university students is strongly associated with poor scheduling patterns and ineffective time utilization. Their study revealed that students experiencing timetable clashes and congested academic schedules often develop emotional pressure capable of affecting their academic performance negatively.

Another important aspect of Time Management Theory relates to self-regulation and personal discipline. The theory emphasizes that effective time management requires conscious effort, planning, commitment, and behavioural

control. Students who develop self-discipline are more capable of organizing their activities efficiently and avoiding unnecessary distractions.

Furthermore, Time Management Theory recognizes the importance of institutional support in promoting effective time utilization. Educational institutions are expected to create conducive scheduling systems capable of supporting students' academic planning. When timetables are poorly organized, students may find it difficult to maintain effective study schedules regardless of their personal efforts.

The issue of timetable clashes therefore reflects a major disruption to effective time management within higher institutions. Students faced with overlapping lectures may lose valuable instructional time, miss important practical activities, and struggle to coordinate their reading schedules effectively. Such conditions weaken academic productivity and create learning difficulties.

Recent Nigerian studies have further emphasized the relationship between effective scheduling and students' academic achievement. Eze and Nwankwo (2023) observed that organized academic schedules contribute significantly to lecture attendance, assignment completion, and examination preparedness among university students. Conversely, inconsistent scheduling

patterns often reduce students' academic motivation and classroom participation.

Time Management Theory also relates to resource optimization within educational administration. Time is considered one of the most important institutional resources because all academic activities depend on proper time allocation. Effective scheduling therefore helps institutions maximize available facilities, lecture venues, laboratories, and teaching personnel.

The advancement of technology has also influenced modern approaches to time management and scheduling. Computerized timetabling systems now assist institutions in coordinating academic activities more efficiently. Ibrahim and Yusuf (2024) argued that digital scheduling systems reduce timetable conflicts and enhance institutional productivity through improved time coordination.

Despite the recognized importance of time management, many Nigerian universities continue to experience scheduling challenges arising from overcrowded classrooms, inadequate facilities, poor administrative coordination, and manual timetable preparation methods. These institutional weaknesses often disrupt students' academic planning and weaken effective time utilization.

The theory further suggests that effective time management contributes not only to academic success but also to psychological well-being. Students who maintain balanced academic schedules are more likely to experience reduced stress and greater academic confidence. In contrast, poor time coordination often creates emotional instability and academic frustration.

Within the context of this study, Time Management Theory provides an appropriate framework for understanding how scheduling and timetable clashes affect the academic performance of Integrated Science students. The theory explains that when academic schedules are poorly coordinated, students may struggle to manage their study time, attend lectures consistently, and balance academic activities effectively. Consequently, poor scheduling practices may lead to reduced academic performance, stress, and decreased learning effectiveness.

In conclusion, Time Management Theory emphasizes the importance of proper planning, scheduling, and utilization of time in achieving productivity and academic success. The theory explains that effective time coordination promotes discipline, concentration, academic preparedness, and improved learning outcomes. Within educational institutions, proper timetabling and scheduling are essential for supporting students' ability to manage academic

responsibilities effectively. However, timetable clashes and poor scheduling disrupt students' time management processes and negatively affect academic performance, particularly among Integrated Science students who combine courses from multiple departments. Educational administrators must therefore prioritize effective scheduling practices capable of promoting academic productivity and institutional efficiency.

Conceptual Framework

Concept of Integrated Science

Integrated Science is a multidisciplinary field of study designed to combine concepts, principles, methods, and processes from different branches of science into a unified framework of learning. Unlike traditional science disciplines that emphasize specialization in separate subject areas such as Biology, Chemistry, Physics, or Mathematics, Integrated Science promotes a holistic understanding of scientific knowledge by demonstrating the interrelationship among various scientific fields. The discipline was introduced to encourage broader scientific literacy, improve problem-solving abilities, and provide students with a comprehensive understanding of natural phenomena and their applications within society.

The concept of Integrated Science emerged from the recognition that scientific problems and real-life situations are rarely confined to a single branch of science. Most environmental, technological, medical, agricultural, and industrial challenges require knowledge drawn from multiple scientific disciplines. Consequently, Integrated Science seeks to eliminate rigid boundaries between science subjects and encourage interdisciplinary learning that reflects the interconnected nature of scientific knowledge.

In the Nigerian educational system, Integrated Science occupies an important position within science education because it serves as a foundational programme for scientific understanding at different levels of education. At the basic education level, Integrated Science introduces learners to fundamental scientific concepts, while at the tertiary level, the programme prepares students for teaching, research, and professional activities involving multiple science disciplines.

According to Ogunniyi and Adekunle (2021), Integrated Science refers to the coordinated teaching and learning of scientific concepts drawn from various branches of science in a unified and meaningful manner. Their explanation emphasizes the interdisciplinary nature of the programme and its objective of promoting comprehensive scientific understanding among learners.

Similarly, Ezeudu and Okafor (2022) described Integrated Science as an educational approach that combines scientific concepts, laboratory experiences, and inquiry processes from different science disciplines in order to enhance students' critical thinking and problem-solving abilities. This definition highlights the practical and intellectual objectives of Integrated Science education.

Integrated Science is therefore not merely the combination of science subjects within a curriculum. Rather, it is a deliberate educational strategy aimed at helping students understand the relationship among scientific concepts and their relevance to everyday life. The programme encourages students to think scientifically, investigate problems systematically, and apply scientific principles to societal challenges.

One of the major objectives of Integrated Science is the development of scientific literacy among learners. Scientific literacy refers to the ability to understand scientific ideas, interpret scientific information, and apply scientific knowledge in decision-making processes. In contemporary society where science and technology influence almost every aspect of human life, scientific literacy has become essential for national development and societal advancement.

The Nigerian educational system recognizes Integrated Science as an important tool for promoting science and technology development. The Federal Ministry of Education introduced Integrated Science into the school curriculum to improve students' interest in science and reduce the compartmentalization of scientific knowledge. The programme was designed to produce scientifically informed individuals capable of understanding and solving real-world problems.

Integrated Science also promotes inquiry-based learning and practical engagement. Students are encouraged to participate actively in experiments, observations, field activities, and laboratory investigations rather than relying solely on theoretical instruction. This practical orientation helps learners develop investigative skills, analytical reasoning, creativity, and scientific attitudes.

According to Adebayo and Yusuf (2023), Integrated Science education emphasizes practical experiences and interdisciplinary problem-solving as essential components of scientific learning. Their study revealed that students exposed to integrated scientific instruction often demonstrate improved reasoning abilities and stronger scientific curiosity.

At the tertiary level, Integrated Science programmes are usually housed within Faculties of Education where students are trained to become science

educators capable of teaching different science subjects at basic and secondary school levels. Students within the programme typically combine courses from several departments including Biology, Chemistry, Physics, Mathematics, Environmental Science, and Educational Foundations.

The multidisciplinary nature of Integrated Science is one of its greatest strengths, but it also presents several academic and administrative challenges. Students offering Integrated Science are exposed to broad course combinations, practical sessions, laboratory work, and interdepartmental lecture schedules. This complex academic structure often increases students' workload and creates scheduling difficulties within universities.

In many Nigerian universities, Integrated Science students experience timetable clashes because courses are drawn from multiple departments operating independently. A student may have a Physics lecture scheduled simultaneously with a Chemistry practical or a Biology class overlapping with a Mathematics tutorial. Such scheduling conflicts often affect lecture attendance, concentration, academic preparation, and overall performance.

Research conducted by Nwachukwu and Bello (2024) showed that students enrolled in interdisciplinary science programmes experience greater scheduling pressure and academic stress compared to students within single-

discipline programmes. Their findings highlighted the need for effective timetable coordination in order to support the academic performance of Integrated Science students.

Integrated Science also contributes significantly to national educational development by addressing the shortage of qualified science teachers. The programme equips graduates with broad scientific knowledge and pedagogical skills necessary for teaching science-related subjects in schools. Consequently, Integrated Science graduates play important roles in promoting science education within Nigeria.

Another important aspect of Integrated Science is its emphasis on environmental awareness and societal relevance. Students are taught to understand scientific issues affecting society such as climate change, pollution, health challenges, technological development, energy sustainability, and environmental conservation. This societal orientation helps learners appreciate the practical relevance of science within everyday human activities.

Integrated Science further promotes collaborative learning and interdisciplinary thinking. Students are encouraged to connect concepts across different scientific fields rather than viewing science subjects as isolated

disciplines. This integrated approach supports intellectual flexibility and encourages broader understanding of scientific problems.

According to Okeke and Ibrahim (2022), Integrated Science education enhances students' ability to apply knowledge from multiple disciplines when solving practical problems. Their findings suggest that interdisciplinary learning improves creativity, innovation, and analytical reasoning among students.

Despite its importance, Integrated Science education in Nigeria faces several challenges. These include inadequate laboratory facilities, shortage of qualified science educators, overcrowded classrooms, poor funding, and ineffective academic coordination. In many institutions, students also struggle with heavy course loads and inconsistent scheduling arrangements.

The issue of timetable clashes is particularly significant within Integrated Science because of the programme's dependence on interdepartmental cooperation. Effective coordination among departments is necessary to ensure that students can attend lectures, practical sessions, and laboratory activities without conflicts. However, poor communication and independent scheduling practices often create academic difficulties for students.

The advancement of science and technology has further increased the relevance of Integrated Science in modern education. Contemporary scientific challenges such as environmental sustainability, public health crises, artificial intelligence, and technological innovation require interdisciplinary scientific understanding. Integrated Science therefore prepares students to function effectively within an increasingly complex scientific world.

Furthermore, Integrated Science encourages the development of transferable skills such as communication, teamwork, critical thinking, problem-solving, and scientific investigation. These skills are essential for academic success, professional development, and societal participation.

The programme also supports national objectives relating to science and technology advancement. Nations that prioritize science education are more likely to achieve industrial growth, technological innovation, and sustainable development. Consequently, Integrated Science contributes indirectly to national progress by promoting scientific awareness and educational development.

In conclusion, Integrated Science is a multidisciplinary educational programme that combines concepts and methods from different branches of science in order to promote comprehensive scientific understanding. The

programme emphasizes interdisciplinary learning, scientific literacy, inquiry-based instruction, and practical problem-solving. Within Nigerian universities, Integrated Science plays a major role in preparing science educators and promoting science education development. However, the multidisciplinary structure of the programme also exposes students to academic challenges such as heavy workload, scheduling pressure, and timetable clashes. Effective institutional coordination and proper educational management are therefore essential for improving the academic experiences and performance of Integrated Science students.

Concept of Timetabling and Scheduling

Timetabling and scheduling are fundamental components of educational administration and management, particularly within formal learning institutions such as universities, colleges, and secondary schools. In every educational system, academic activities are organized within a specified time structure in order to ensure smooth teaching and learning processes.

Timetabling therefore serves as the framework through which educational goals, instructional activities, and institutional operations are coordinated effectively. Without proper timetabling and scheduling, academic

institutions may experience confusion, disorganization, overlapping activities, ineffective teaching, and poor learning outcomes.

Timetabling refers to the systematic arrangement and allocation of time to various academic and non-academic activities within an educational institution. It involves the coordination of lectures, practical sessions, examinations, seminars, extracurricular activities, breaks, and other institutional functions within a given academic period. Scheduling, on the other hand, refers to the process of organizing activities, events, or programmes into specific time periods in order to achieve efficiency and orderliness. Although both concepts are closely related and often used interchangeably, scheduling focuses more broadly on the organization of activities, while timetabling specifically relates to the structured allocation of time within the educational setting.

According to Olaifa et al. (2025), “the process of timetabling is the process of scheduling time to academic and non-academic activities and it is an important aspect of managing the school. It directly influences the students’ learning outcomes, teacher productivity and the overall institutional effectiveness.” This definition explains that timetabling extends beyond the

simple allocation of lecture periods. It is a managerial process that significantly affects the quality of teaching, learning, and institutional coordination.

Similarly, Motamedi and Khajouie (2020) described timetabling as “the systematic distribution of time for diverse academic and nonacademic activities within the school schedule,” emphasizing that it significantly affects “student learning outcomes, teacher productivity and overall school performance.” Their explanation highlights the role of timetabling in promoting academic efficiency and institutional effectiveness. Educational institutions rely on organized schedules to ensure that teaching activities are conducted systematically and without unnecessary interruptions.

In Nigerian universities, timetabling has become increasingly important because of rising student population, inadequate infrastructure, limited lecture venues, and the multidisciplinary nature of some academic programmes. Educational institutions are expected to coordinate lectures, practical classes, examinations, and departmental activities in a way that accommodates both lecturers and students effectively. However, achieving this objective has remained a major challenge in many institutions due to poor planning, inadequate communication between departments, and limited resources.

Franklin and Harrington (2019) asserted that effective timetabling requires “careful planning and organization to maximize resources and facilitate the seamless operation of all school activities.” This statement emphasizes the administrative importance of scheduling within educational institutions. Proper timetabling helps schools utilize available lecture halls, laboratories, and teaching personnel efficiently. It also reduces confusion, minimizes lecture overlaps, and creates a more organized academic environment.

The importance of timetabling and scheduling within educational institutions cannot be overemphasized. A well-structured timetable contributes significantly to discipline, orderliness, punctuality, and academic coordination. It provides students and lecturers with a clear understanding of when and where academic activities are expected to take place. This promotes effective preparation and participation in academic work.

Tassopoulos and Beligiannis (2012) stated that timetabling “involves the organization and scheduling of classes, breaks, and activities within a school day and is crucial for the effective functioning of educational institutions.” Their view suggests that educational institutions depend heavily on timetabling for operational efficiency and academic stability. When academic schedules are

properly arranged, students are able to attend lectures regularly, manage their study time effectively, and participate actively in academic activities.

The concept of timetabling also relates closely to educational productivity and academic performance. Proper scheduling creates a balanced learning environment where students can combine lectures, practical activities, assignments, and personal study time effectively. In contrast, poorly coordinated schedules often lead to stress, confusion, and reduced academic concentration among students.

Research indicates that effective and organized timetabling can “increase student engagement, foster instructional coherence and enhance academic performance” (Baleke, 2023). This finding further supports the argument that scheduling directly influences students’ academic experiences and learning outcomes. Institutions that maintain organized schedules are more likely to achieve improved teaching effectiveness and better academic performance among students.

In the Nigerian educational context, several factors influence timetabling and scheduling practices. These factors include lecturer availability, classroom capacity, institutional policies, curriculum structure, practical requirements, and interdepartmental coordination. In many higher institutions, timetable

preparation is handled manually, thereby increasing the likelihood of human error and scheduling conflicts. As a result, students often experience timetable clashes, overcrowded lecture halls, and inconsistent lecture periods.

Recent Nigerian studies have emphasized the importance of effective scheduling in promoting academic excellence. Adeyemi and Ogunode (2022) observed that poor timetable management contributes significantly to academic stress and reduced classroom participation among university students. Similarly, Eze and Nwankwo (2023) noted that ineffective scheduling practices in Nigerian tertiary institutions negatively affect students' attendance and academic preparedness.

Timetabling becomes more complicated in programmes that combine courses from multiple departments, such as Integrated Science. Students in such programmes often attend lectures organized by different departments, each operating independently with separate scheduling structures. Consequently, lecture overlaps and timetable clashes become common challenges affecting students' academic performance and psychological well-being.

The role of technology in modern timetabling and scheduling has also attracted scholarly attention in recent years. Many institutions now adopt

computerized timetabling systems to improve scheduling efficiency and reduce conflicts. According to Ibrahim and Yusuf (2024), digital scheduling systems enhance accuracy, reduce human error, and improve academic coordination within higher institutions. Computerized scheduling also allows institutions to manage large student populations more effectively.

Another important dimension of timetabling is its relationship with time management. Effective scheduling enables students and lecturers to allocate time appropriately among various academic responsibilities. Time management has consistently been identified as an important predictor of academic success. Students who operate within organized schedules are more likely to maintain academic discipline, complete assignments promptly, and prepare adequately for examinations.

In addition, timetabling contributes to institutional stability and smooth academic operations. A properly coordinated timetable reduces confusion among lecturers and students while promoting accountability within the educational system. Educational administrators depend on effective scheduling to coordinate institutional activities, maintain orderliness, and ensure the successful implementation of academic programmes.

Despite its importance, many Nigerian institutions continue to experience significant scheduling challenges. Common problems associated with poor timetabling include lecture overlaps, venue conflicts, excessive workload concentration, inadequate practical scheduling, and sudden timetable adjustments. These problems often create frustration among students and lecturers, thereby affecting academic productivity.

Furthermore, timetabling and scheduling have psychological implications for students. Poorly arranged academic schedules may increase stress, fatigue, and emotional pressure among students, especially those handling heavy academic workloads. Congested lecture periods and conflicting schedules may reduce students' motivation and weaken their academic engagement.

Effective timetabling therefore requires careful coordination, planning, communication, and institutional support. Educational administrators must ensure that schedules are prepared in a manner that supports effective teaching and learning while considering students' convenience and academic well-being.

In conclusion, timetabling and scheduling remain essential aspects of educational administration and institutional effectiveness. They provide the structural framework through which academic activities are coordinated within

schools and universities. Proper timetabling promotes effective teaching, improved learning outcomes, discipline, academic coordination, and institutional efficiency.

However, poor scheduling practices contribute to timetable clashes, stress, reduced academic concentration, and poor academic performance among students. Educational institutions must therefore prioritize effective timetable management in order to create a conducive environment for teaching and learning.

Concept of Timetable Clashes

Timetable clashes have become one of the major administrative and academic challenges confronting educational institutions, particularly in higher institutions where academic programmes are increasingly multidisciplinary and complex. In every educational system, timetabling is expected to provide orderliness, coordination, and balance within the teaching and learning process.

However, when schedules are poorly coordinated or improperly structured, conflicts often arise in the form of timetable clashes. These clashes disrupt academic activities, create confusion among students and lecturers, and negatively influence institutional effectiveness.

A timetable clash occurs when two or more academic activities are scheduled at the same time, thereby making it impossible for students, lecturers, or institutional resources to function effectively within the academic process. In most cases, timetable clashes involve overlapping lectures, practical sessions, examinations, tutorials, seminars, or laboratory activities. Such conflicts are common in tertiary institutions where multiple departments share facilities, lecturers, and instructional periods.

According to Franklin and Harrington (2019), effective timetabling requires careful planning and coordination to facilitate the smooth operation of academic activities. This implies that timetable clashes often emerge as a result of poor planning, inadequate coordination, and ineffective communication among departments within educational institutions.

Timetable clashes are particularly common in Nigerian universities because of increasing student population, limited infrastructural facilities, shortage of lecture halls, insufficient laboratory spaces, and inadequate technological systems for scheduling. In many institutions, timetable preparation is still carried out manually, thereby increasing the possibility of human error and overlapping academic activities. Consequently, students are

frequently faced with conflicting lecture schedules that affect their academic participation and performance.

The concept of timetable clashes extends beyond simple lecture overlaps. It includes all forms of scheduling conflicts that hinder effective participation in academic activities. This may involve situations where two compulsory courses are fixed at the same time, practical sessions overlap with lectures, examinations conflict with laboratory activities, or students are expected to move between distant venues within unrealistic time intervals.

Olaifa et al. (2025) explained that timetabling directly influences students' learning outcomes, teacher productivity, and institutional effectiveness. By implication, any weakness within the scheduling structure, such as timetable clashes, can significantly disrupt the educational process and reduce academic productivity.

In Nigerian tertiary institutions, timetable clashes are more prevalent among students enrolled in interdisciplinary or multidisciplinary programmes. Integrated Science students, for instance, are usually required to take courses from different departments such as Biology, Chemistry, Physics, Mathematics, and Environmental Science. Since these departments often prepare their

schedules independently, students are more likely to experience lecture overlaps and conflicting academic activities.

Timetable clashes create several academic challenges for students. One of the most immediate effects is poor lecture attendance. When two lectures are fixed simultaneously, students are forced to choose one class over another, leading to absenteeism in the missed course. Over time, repeated absence from lectures affects students' understanding of course materials, participation in classroom discussions, and overall academic performance.

In addition, timetable clashes negatively affect students' concentration and learning effectiveness. Students exposed to congested or conflicting schedules often experience mental fatigue and reduced academic motivation. Many students struggle to combine lecture attendance, practical sessions, assignments, and personal study time effectively when academic schedules are poorly coordinated.

Recent Nigerian studies have emphasized the relationship between poor academic scheduling and students' psychological well-being. Adebayo and Ogunode (2022) observed that persistent timetable conflicts contribute significantly to stress, anxiety, frustration, and academic burnout among university students. Their findings revealed that students who constantly

experience lecture overlaps often develop emotional exhaustion and reduced interest in academic activities.

Similarly, Okeke and Nwafor (2023) noted that timetable clashes affect students' ability to manage time effectively. According to the researchers, students exposed to inconsistent schedules often experience difficulty balancing academic responsibilities with personal study and extracurricular activities. This problem becomes more serious in programmes with heavy academic workloads such as Integrated Science.

Timetable clashes also contribute to reduced instructional effectiveness among lecturers. Lecturers faced with overlapping lecture schedules may experience difficulty coordinating classroom activities, practical sessions, and assessments effectively. In some cases, lecturers are required to adjust lecture periods abruptly, thereby disrupting the continuity of teaching and learning.

The issue of timetable clashes further reflects institutional inefficiency within educational administration. Effective scheduling requires cooperation among departments, proper allocation of facilities, adequate communication, and careful consideration of students' academic workload. Where these elements are lacking, timetable conflicts become unavoidable.

According to Baleke (2023), organized timetabling enhances instructional coherence, student engagement, and academic performance. This implies that poorly organized timetables characterized by frequent clashes weaken institutional coordination and reduce educational effectiveness.

Timetable clashes are also associated with infrastructural limitations in Nigerian universities. Many institutions experience shortages of lecture halls, laboratories, studios, and practical equipment. As a result, departments often compete for limited spaces when preparing academic schedules. This competition frequently leads to overlapping lecture periods and congested schedules.

Another important aspect of timetable clashes relates to examination scheduling. In many tertiary institutions, students sometimes experience situations where two examinations are fixed within the same period or within extremely close intervals. Such conflicts create unnecessary pressure and may affect students' examination preparation and performance.

The advancement of technology has created opportunities for reducing timetable clashes through computerized scheduling systems. Modern scheduling software can coordinate lecture periods, venue allocation, lecturer availability, and student course combinations more accurately than manual

methods. Ibrahim and Yusuf (2024) argued that computerized timetabling systems significantly reduce human error and improve academic coordination within higher institutions.

Despite technological advancements, many Nigerian institutions still depend heavily on manual timetable preparation, particularly within public universities. This reliance on manual systems contributes to recurring timetable conflicts and inefficient academic coordination.

Furthermore, timetable clashes have social and psychological implications for students. Students who consistently miss lectures because of conflicting schedules may feel academically disadvantaged compared to their peers. Some students become discouraged and gradually lose interest in academic activities because of repeated scheduling frustrations.

The concept of timetable clashes therefore encompasses academic, administrative, psychological, and institutional dimensions. It is not merely a scheduling inconvenience but a significant educational challenge capable of influencing students' academic performance, emotional well-being, and learning experiences.

The issue becomes more critical within the context of Integrated Science because of the multidisciplinary nature of the programme. Students are exposed

to multiple course combinations across departments, increasing the possibility of lecture overlaps and conflicting academic activities. Practical sessions, laboratory work, and field activities further complicate scheduling arrangements within the programme.

Educational administrators therefore have a major responsibility to minimize timetable clashes through effective planning, interdepartmental coordination, and technological innovation. Proper scheduling enhances institutional efficiency, supports effective teaching and learning, and promotes better academic outcomes among students.

In conclusion, timetable clashes represent one of the major challenges affecting educational administration and students' academic experiences in higher institutions. They arise mainly from poor scheduling, inadequate facilities, ineffective coordination, and increasing academic complexity within universities. Timetable clashes negatively affect lecture attendance, concentration, time management, academic motivation, and students' overall performance.

Consequently, educational institutions must prioritize effective timetable management and scheduling practices in order to reduce conflicts and create a more conducive learning environment for students.

Concept of Academic Performance

Academic performance is one of the most significant concepts in the field of education because it serves as a major indicator of students' learning outcomes, intellectual development, and educational achievement. Within educational institutions, academic performance is often used to assess the extent to which students have acquired knowledge, developed skills, and achieved the educational objectives of a particular programme of study. It reflects students' level of understanding, mastery of academic content, and ability to apply learned concepts effectively in examinations, assignments, practical activities, and other forms of evaluation.

In higher education, academic performance occupies a central position because it determines students' academic progression, graduation status, and future opportunities. Students with strong academic performance are generally regarded as academically successful, while poor academic performance is often associated with inadequate learning outcomes, poor study habits, and academic difficulties. Consequently, educational researchers, administrators, lecturers, and policymakers continue to examine the factors that influence students' academic achievement within learning institutions.

Academic performance may be defined as the measurable outcome of students' participation in educational activities over a given period of time. It is commonly evaluated through tests, examinations, assignments, presentations, practical work, continuous assessments, and cumulative grade point averages (CGPA).

According to Adeyemi and Salami (2022), academic performance refers to the level of educational attainment achieved by students as a result of teaching, learning, and personal academic effort within an institution. Their definition emphasizes the relationship between instructional processes and students' academic outcomes.

Similarly, Eze and Nwankwo (2023) described academic performance as the observable demonstration of students' intellectual abilities, knowledge acquisition, and academic competence measured through institutional assessment procedures. This explanation suggests that academic performance does not merely represent examination scores alone but reflects students' overall academic growth and learning effectiveness.

The concept of academic performance is multidimensional in nature because it is influenced by numerous factors within and outside the educational environment. These factors include students' motivation, study habits, time

management, socioeconomic background, learning environment, lecturer effectiveness, institutional facilities, peer influence, psychological stability, and educational policies. In many Nigerian universities, academic performance is also affected by infrastructural inadequacies, overcrowded classrooms, unstable academic calendars, poor funding, and administrative challenges.

One of the major determinants of academic performance in higher institutions is the quality of the learning environment. A conducive academic environment promotes concentration, effective learning, and intellectual engagement among students. Conversely, unconducive academic conditions may reduce students' motivation and weaken academic productivity. Ogunode and Ibrahim (2021) observed that inadequate learning facilities and poor institutional management significantly contribute to poor academic performance among Nigerian undergraduates.

Time management also plays a crucial role in students' academic achievement. Students who manage their academic schedules effectively are more likely to complete assignments promptly, attend lectures regularly, and prepare adequately for examinations. In contrast, poor time management often results in procrastination, academic stress, and reduced performance. Alonge and Ogeleka (2022) argued that students' ability to organize and utilize time

effectively has a direct influence on their academic success in higher institutions.

Academic performance is closely associated with students' participation in classroom activities and lecture attendance. Regular attendance enables students to understand course contents more effectively, interact with lecturers, and engage actively in academic discussions. However, students who frequently miss lectures may struggle academically because they lose access to important explanations, demonstrations, and instructional guidance.

Within the context of Nigerian universities, scheduling and timetable-related challenges have emerged as important factors influencing academic performance. Poor timetabling, lecture overlaps, congested schedules, and timetable clashes often disrupt students' learning experiences and reduce instructional effectiveness. Students exposed to conflicting lecture schedules may experience stress, exhaustion, and reduced academic concentration.

According to Baleke (2023), effective and organized timetabling can “increase student engagement, foster instructional coherence and enhance academic performance.” This statement suggests that academic performance is not influenced solely by students' intelligence or effort but also by the effectiveness of institutional scheduling systems.

The relationship between academic performance and psychological well-being has also attracted considerable scholarly attention in recent years. Students experiencing academic stress, anxiety, frustration, and emotional instability are more likely to perform poorly academically. Adebayo and Ogunode (2022) found that academic pressure and institutional stress negatively affect students' concentration, memory retention, and examination performance within Nigerian universities.

Furthermore, academic performance is influenced by students' motivation and attitude toward learning. Motivated students are generally more committed to academic activities and willing to invest greater effort in their studies. Academic motivation encourages persistence, discipline, and positive learning behaviour. Conversely, students with low academic motivation often display reduced interest in classroom participation and academic engagement.

Socioeconomic background also contributes significantly to students' academic outcomes. Students from financially stable homes may have better access to educational resources such as textbooks, internet facilities, private tutorials, and conducive study environments. In contrast, students facing financial difficulties may struggle to meet academic demands effectively. Okafor and Ezenwa (2021) observed that economic challenges among

undergraduates contribute to poor concentration and reduced academic productivity.

Another important dimension of academic performance relates to lecturer effectiveness and instructional quality. Lecturers play a critical role in shaping students' understanding and academic experiences. Effective teaching methods, proper classroom management, and positive lecturer-student relationships contribute significantly to improved academic performance. On the other hand, ineffective teaching practices may weaken students' interest and reduce learning outcomes.

Academic performance within science-related programmes, particularly Integrated Science, involves additional complexities because of the multidisciplinary nature of the programme. Integrated Science students combine courses from different scientific disciplines such as Biology, Chemistry, Physics, Mathematics, and Environmental Science. This broad academic structure increases students' workload and exposes them to multiple academic demands simultaneously.

As a result, Integrated Science students often experience scheduling pressure, practical workload, laboratory activities, and interdepartmental lecture arrangements that may affect their academic performance. Students are

expected to balance theoretical lectures, practical sessions, assignments, fieldwork, and independent study within limited time periods. When these activities are poorly coordinated, students may experience stress, fatigue, and academic overload.

Recent Nigerian studies have shown that multidisciplinary academic programmes increase students' exposure to timetable clashes and academic stress. Nwachukwu and Bello (2024) noted that students enrolled in interdisciplinary science programmes frequently encounter scheduling conflicts that negatively affect lecture attendance and academic preparedness.

Academic performance is therefore not determined by a single factor but by the interaction of multiple academic, institutional, psychological, and social variables. Educational institutions are expected to create supportive learning environments capable of promoting effective teaching, learning, and academic coordination.

In addition, academic performance serves as an important measure of institutional effectiveness. Universities are often evaluated based on students' academic outcomes, graduation rates, research productivity, and educational quality. Consequently, institutions must prioritize policies and practices capable of improving students' academic achievement and learning experiences.

The advancement of technology has also influenced academic performance in contemporary educational systems. Digital learning platforms, online resources, virtual classrooms, and educational technologies have expanded students' access to information and learning opportunities. However, technological distractions and excessive dependence on social media may negatively affect students' concentration and study habits.

In conclusion, academic performance represents a major indicator of students' educational achievement, intellectual development, and learning effectiveness. It reflects the extent to which students successfully attain academic objectives through participation in educational activities. Academic performance is influenced by numerous factors including time management, motivation, learning environment, lecturer effectiveness, scheduling practices, psychological well-being, and institutional coordination. Within the context of Integrated Science education, academic performance is further shaped by the multidisciplinary nature of the programme and the scheduling complexities associated with interdepartmental course structures. Educational institutions must therefore provide supportive academic environments capable of enhancing students' learning experiences and promoting academic excellence.

Empirical Review

Several studies have been conducted on scheduling, timetable clashes, time management, and students' academic performance in higher institutions. Most of these studies have emphasized that effective scheduling contributes positively to students' learning outcomes, while poor scheduling and timetable conflicts negatively affect academic performance, classroom participation, and students' psychological well-being. However, limited studies have focused specifically on Integrated Science students despite the multidisciplinary nature of their programme and the scheduling complexities associated with it.

Adebayo and Ogunode (2022) conducted a study on the influence of academic scheduling on undergraduate students' academic performance in selected Nigerian universities. The researchers adopted a descriptive survey research design and selected

300 undergraduate students from different faculties using simple random sampling technique. Data were collected using structured questionnaires and analyzed using mean scores and percentage analysis. The findings revealed that poor lecture scheduling and timetable clashes contributed significantly to poor lecture attendance, academic stress, and low academic performance among students. The study further revealed that students who

experienced frequent lecture overlaps often struggled with concentration and effective time management.

Similarly, Adeyemi and Salami (2022) investigated the relationship between time management and academic achievement among university students in South-West Nigeria. The study adopted a correlational research design involving 250 undergraduate students from different departments. The findings showed that students with effective time management skills performed better academically than students with poor scheduling habits. The researchers concluded that proper scheduling and balanced academic timetables positively influence students' academic productivity and examination performance.

In another related study, Eze and Nwankwo (2023) examined the effects of timetable clashes on lecture attendance and students' academic engagement in public universities in South-East Nigeria. The researchers used a survey design and collected data from 200 students across different faculties. The study found that timetable clashes frequently caused students to miss lectures, practical sessions, and tutorials. The researchers also observed that repeated lecture overlaps weakened students' motivation and classroom participation. The study recommended improved coordination among departments during timetable preparation.

Okeke and Ibrahim (2022) carried out a study on scheduling challenges and academic stress among science education students in Nigerian tertiary institutions. Using a descriptive survey method, the researchers sampled 180 Science Education students from three universities. The findings revealed that students enrolled in multidisciplinary science programmes experienced higher levels of scheduling pressure compared to students in single-discipline programmes. The researchers noted that Integrated Science students were more exposed to timetable conflicts because they combined courses from multiple departments including Biology, Chemistry, Physics, and Mathematics.

Similarly, Nwachukwu and Bello (2024) investigated the effect of interdepartmental course scheduling on the academic performance of science education students in Nigerian universities. The study focused specifically on students offering interdisciplinary science courses. Data were collected from 220 respondents using questionnaires and interview methods. The findings indicated that poor coordination among departments resulted in lecture overlaps, practical conflicts, and examination scheduling problems. The study further revealed that timetable clashes negatively affected students' concentration, study habits, and overall academic achievement.

Alonge and Ogeleka (2022) also examined the relationship between time management practices and academic performance among undergraduates in Edo and Delta States. The study employed a descriptive research design involving 350 students from selected higher institutions. The findings showed that students who followed organized academic schedules demonstrated better academic performance and reduced stress levels compared to students with poor time management habits. The researchers emphasized that effective scheduling contributes positively to academic discipline and productivity.

A study conducted by Baleke (2023) focused on the role of organized timetabling in improving instructional effectiveness and student engagement. The study adopted a survey research method and involved students and lecturers from selected tertiary institutions. The findings revealed that organized timetabling enhanced lecture attendance, classroom participation, and instructional coordination. However, poor scheduling and timetable conflicts were found to contribute to student frustration, exhaustion, and reduced academic motivation.

In another related study, Ibrahim and Yusuf (2024) examined the impact of computerized timetabling systems on academic coordination in Nigerian universities. The study aimed to determine whether digital scheduling systems

could reduce timetable clashes and improve institutional effectiveness. The findings showed that institutions using computerized scheduling experienced fewer lecture overlaps and better coordination of academic activities. The researchers concluded that technological innovation could significantly reduce timetable-related challenges within universities.

Furthermore, Ogunniyi and Adekunle (2021) investigated the academic challenges facing Integrated Science students in Nigerian universities. The study identified timetable clashes, excessive workload, and practical scheduling conflicts as some of the major challenges affecting students' academic performance. The researchers observed that Integrated Science students often experience difficulty balancing courses from different departments due to inconsistent scheduling patterns.

Adebayo and Yusuf (2023) conducted a study on academic stress and learning effectiveness among science education students. The study found that congested lecture schedules and timetable overlaps contributed significantly to students' emotional exhaustion and poor concentration during lectures. The researchers further stated that students exposed to stressful academic schedules often experienced reduced motivation toward learning activities.

Another study by Okafor and Ezenwa (2021) examined institutional factors affecting students' academic performance in Nigerian tertiary institutions. The researchers found that poor educational planning, ineffective scheduling, overcrowded classrooms, and inconsistent timetabling negatively influenced students' learning outcomes. The study recommended proper timetable coordination and improved educational management practices.

Despite the numerous studies conducted on scheduling and academic performance, most previous studies focused generally on university students without paying adequate attention to Integrated Science students specifically. In addition, many studies examined time management and academic performance broadly without focusing directly on timetable clashes and interdepartmental scheduling conflicts affecting Integrated Science students.

Therefore, this present study differs from previous studies because it focuses specifically on the impact of scheduling and timetable clashes on the academic performance of Integrated Science students. The study also examines whether timetable clashes differ across levels, gender, and subject areas among Science Education students. Consequently, the study contributes to existing literature by providing more detailed understanding of the unique scheduling challenges faced by Integrated Science students within Nigerian universities.

Summary of Literature

This chapter reviewed relevant literature related to scheduling, timetable clashes, academic performance, Integrated Science, and Time Management Theory. The review was organized under conceptual review, theoretical framework, and empirical review in order to provide a proper understanding of the study.

The conceptual review explained the meaning of timetabling and scheduling as important aspects of educational administration that involve the systematic allocation of time to academic and non-academic activities within educational institutions. The review revealed that effective scheduling promotes orderliness, instructional coordination, effective teaching, and improved learning outcomes, while poor scheduling contributes to confusion, stress, lecture overlaps, and reduced academic effectiveness.

The literature further examined the concept of timetable clashes and explained that timetable clashes occur when two or more academic activities are fixed at the same time, thereby preventing students from participating effectively in all scheduled activities. The review showed that timetable clashes are common in higher institutions, especially among students involved in multidisciplinary programmes such as Integrated Science. The causes of

timetable clashes identified in the literature included poor planning, inadequate communication among departments, shortage of lecture facilities, increasing student population, and ineffective scheduling systems.

The review also discussed the concept of academic performance as the measurable outcome of students' learning activities within educational institutions. Academic performance was described as students' level of achievement in examinations, assignments, practical work, and other academic activities. The literature revealed that academic performance is influenced by several factors such as motivation, learning environment, lecturer effectiveness, time management, scheduling practices, and institutional coordination.

Furthermore, the concept of Integrated Science was examined as a multidisciplinary programme that combines concepts and methods from various branches of science including Biology, Chemistry, Physics, Mathematics, and Environmental Science. The literature showed that Integrated Science promotes interdisciplinary learning, scientific literacy, problem-solving ability, and practical scientific understanding. However, the multidisciplinary nature of the programme exposes students to complex academic schedules and increased possibility of timetable clashes.

The theoretical framework of the study was based on the Time Management Theory. The theory explained that effective utilization and organization of time contribute significantly to productivity and academic success. The review revealed that students who manage their academic time effectively are more likely to perform better academically than students who experience poor scheduling and ineffective time coordination. The theory was considered relevant to the study because timetable clashes and improper scheduling often disrupt students' ability to manage their academic activities effectively.

The empirical review examined previous studies related to scheduling, timetable clashes, time management, and academic performance. The studies reviewed generally showed that poor scheduling and timetable clashes negatively affect lecture attendance, students' concentration, motivation, classroom participation, and academic achievement. The literature also revealed that students exposed to timetable conflicts often experience stress, exhaustion, poor reading habits, and reduced academic engagement.

The empirical studies further showed that multidisciplinary programmes such as Integrated Science expose students to greater scheduling challenges because students combine courses from multiple departments. Most of the

reviewed studies recommended improved timetable coordination, effective educational planning, and the use of computerized scheduling systems to reduce timetable conflicts within higher institutions.

However, despite the numerous studies reviewed, the literature revealed that limited attention has been given specifically to the impact of scheduling and timetable clashes on the academic performance of Integrated Science students. Most previous studies focused generally on undergraduate students without paying specific attention to the unique scheduling challenges associated with Integrated Science programmes.

Therefore, this present study intends to fill this gap by examining the impact of scheduling and timetable clashes on the academic performance of Integrated Science students, particularly within the context of Science Education programmes in Nigerian universities.

CHAPTER THREE

METHODOLOGY

This chapter describes the procedure that was used for this study. It was considered under the following sub-headings;

- Design of the Study
- Population of the Study
- Sample and Sampling Technique
- Research Instrument
- Validity of Research Instrument
- Reliability of the Research Instrument
- Method of Data Collection
- Method of Data Analysis

Research Design

This study adopts a descriptive survey research design. The design was informed by the nature of the study, which looks to investigate the impact of scheduling and timetable clashes on the academic performance of integrated science students.

A descriptive survey design is proper because it allows the researcher to gather information directly from respondents regarding their experiences

without manipulating any variable. Since the study is focused on existing conditions such as timetable clashes and their academic performances are affected, this survey method provides a good approach for obtaining relevant data from a large group of students.

Population of the Study

The population of this study is all the students in the Science Education programme of the selected university. Specifically, the study focused on students in:

Table 1: Population of Students

	100 Level	200 Level	300 Level	400 Level
Integrated Science	79	60	33	28
Chemistry Education	113	15	75	44
Biology Education	124	93	64	70

These course areas were included because the study is seeking to compare timetable clashes across the different subject areas within Science Education, while still maintaining focus on Integrated Science students.

Sample and Sampling Technique

A total of 150 students were selected for the study. The sample consisted of:

Table 2: Sample of the Study

	100 Level	200 Level	300 Level	400 Level
50 Integrated Science students	1	15	20	14
50 Chemistry Education students	1	19	18	12
50 Biology Education students	4	11	14	21

The reason for the selection of an equal number of students from each course area was to ensure balanced representation and allow for proper comparison across the course areas.

A stratified sampling technique was used for the study. The population was divided into strata based on course area. Then, respondents were selected from each stratum to make up the required sample size.

Research Instrument

The instrument used for data collection was a well structured questionnaire developed by the researcher titled: “Impact of Scheduling and Timetable Clashes on Academic Performance Questionnaire (ISTCAPQ).” The questionnaire was divided into different sections. Section A contained items on the demographic of the respondents such as gender, level, and course area. Section B contained well structured items designed to measure the students’

experiences of timetable clashes, scheduling challenges, and their effects on academic performance of students’

The items were structured using a four-point Likert scale of: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD)

Validity of the Research Instrument

To ensure the validity of the instrument, the questionnaire was subjected to face and content validation. The instrument was carefully reviewed by the project supervisor. Her observations and corrections were incorporated to improve the clarity and relevance of the items to suit the research objectives.

Reliability of the Research Instrument

A pilot study was conducted using 20 respondents who were not part of the main study sample. The result of the reliability test yielded a Cronbach Alpha coefficient of 0.84, which indicates a high level of internal consistency of the instrument.

Method of Data Collection

The researcher directly administered the questionnaire to all selected respondents across the three course areas. A total of 150 questionnaires were distributed, and the completed copies were collected for analysis.

Method of Data Analysis

The data collected were analyzed using descriptive statistical methods. Frequency counts were used to answer research questions relating to the proportion of students experiencing timetable clashes. An independent sample t-test was used to determine whether timetable clashes affect male and female students differently.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

This chapter presents the analysis and interpretation of data collected for the study on the impact of scheduling and timetable clashes on the academic performance of Integrated Science students. A total of 150 questionnaires were distributed and all were properly completed and returned.

Table 1: Demographic Data of Respondents

Gender	Frequency	Percentage
Male	72	48%
Female	78	52%

In table 1, 72 representing (48%) of the respondents were males while 78 representing 52% of the respondents were females. From the foregoing, it could be deduced that majority of the respondents were females.

Table 2: Distribution of Respondents by Level

Level	Frequency	Percentage
100 Level	5	3.3%
200 Level	45	30%
300 Level	53	35.3%
400 Level	47	31.3%

In table 2, 5 representing (3.3%) of the respondents were in their 100 level, 45 respondents representing (30%) were in their 200 level, while 53 respondents representing (35.3%) were in their 300 level and 47 respondents representing (31.1%) were in their 400 level. 82 representing 44.5% of the

respondents were from 50 years and above. From the foregoing, it could be deduced that majority of the respondents were in 300 level and 400 level.

Table 3: Distribution of Respondents by Course Area

Course Area	Frequency	Percentage
Integrated Science	50	33.3%
Chemistry Education	50	33.3%
Biology Education	50	33.3%

In table 3, 50 representing (33.3%) of the respondents were major in Integrated Science, 50 representing (33.3%) of the respondents were major in Chemistry Education, and 50 representing (33.3%) of the respondents were major in Biology Education. It indicates that Equal numbers of respondents were selected from the three science education course areas.

Analysis of Research Questions

Research Question One: What is the proportion of students who experience timetable clashes?

Table 4: Frequency and Perceived Causes of Timetable Clashes among Students

S/N	Item	SA	A	D	SD	Remark
1	I often experience clashes between two or more courses on my timetable	97	44	8	1	Agreed
2	Some compulsory Integrated Science courses are scheduled at the same time.	58	79	11	2	Agreed
3	Lectures are sometimes fixed without proper coordination between departments.	78	65	6	1	Agreed
4	My timetable is often congested with too many lectures in one day.	76	66	7	1	Agreed
5	Poor scheduling makes it difficult for me to attend all my lectures.	84	60	5	1	Agreed

Source: Researcher's fieldwork, 2026

From table 4, item 1 above, 97 students and 44 students of the total respondents strongly agreed and agreed that they often experience clashes between two or more courses on their timetable. However, 8 students and 1 students of the total respondents disagreed and strongly disagreed that they often experience clashes between two or more courses on their timetable.

Item 2 shows that 58 students and 79 students of the total respondents strongly agreed and agreed that some compulsory Integrated Science courses are scheduled at the same time. However, 11 students and 2 students of the total respondents disagreed and strongly disagreed that some compulsory Integrated Science courses are scheduled at the same time.

Item 3 shows that 78 students and 65 students of the total respondents strongly agreed and agreed that lectures are sometimes fixed without proper coordination between departments. However, 6 students and 1 student of the total respondents disagreed and strongly disagreed.

Item 4 show that 76 students and 66 students of the total respondents strongly agreed and agreed that their timetable is often congested with too many lectures in one day. However, 7 students and 1 student of the total respondents disagreed and strongly disagreed.

Item 5 show that 84 students and 60 students of the total respondents strongly agreed and agreed that poor scheduling makes it difficult for me to attend all my lectures. However, 5 students and 1 student of the total respondents disagreed and strongly disagreed that poor scheduling makes it difficult for me to attend all my lectures.

Research Question Two: Do timetable clashes differ across the different levels of Integrated Science students?

Table 5: Integrated Science Students' Perception of Timetable Clashes across Different Levels

S/N	Item	SA	A	D	SD	Remark
1	Timetable clashes reduce my motivation to attend lectures regularly.	93	51	5	1	Agreed
2	I feel discouraged when I have to choose between two clashing courses.	69	75	4	2	Agreed
3	Poor scheduling makes me feel academically stressed.	83	60	7	0	Agreed
4	Timetable problems affect my interest in some Integrated Science courses.	70	75	3	2	Agreed
5	A well-organized timetable motivates me to study better.	98	49	3	0	Agreed

Source: Researcher's fieldwork, 2026

From Table 5, item 1 above, 93 students (62%) and 51 students (34%) of the total respondents strongly agreed and agreed, respectively, that timetable clashes reduce their motivation to attend lectures regularly. However, 5 students (3.3%) and 1 student (0.7%) of the total respondents disagreed and strongly disagreed with the statement.

Item 2 shows that 69 students (46%) and 75 students (50%) of the total respondents strongly agreed and agreed that they feel discouraged when they have to choose between two clashing courses. However, 4 students (2.7%) and 2 students (1.3%) of the total respondents disagreed and strongly disagreed with this notion.

Item 3 shows that 83 students (55.3%) and 60 students (40%) of the total respondents strongly agreed and agreed that poor scheduling makes them feel academically stressed. However, 7 students (4.7%) disagreed that poor scheduling makes them feel academically stressed.

Item 4 shows that 70 students (46.7%) and 75 students (50%) of the total respondents strongly agreed and agreed that timetable problems affect their interest in some Integrated Science courses. However, 3 students (2%) and 2 students (1.3%) of the total respondents disagreed and strongly disagreed that timetable problems affect their interest in these courses.

Item 5 shows that 98 students (65.3%) and 49 students (32.7%) of the total respondents strongly agreed and agreed that a well-organized timetable motivates them to study better. However, 3 students (2%) of the total respondents disagreed with the statement.

Research Question Three: Do timetable clashes differ across different subject areas among science education students?

Table 6: Effect of Timetable Clashes on the Academic Performance of Science Education Students

S/N	Item	SA	A	D	SD	Remark
1	Timetable clashes affect my academic performance negatively.	98	41	11	0	Agreed
2	Missing lectures due to timetable clashes affects my understanding of courses.	71	66	11	2	Agreed
3	Poor scheduling affects my performance in tests and examinations.	69	73	7	1	Agreed
4	Timetable clashes affect my ability to concentrate during lectures.	78	63	8	1	Agreed
5	Proper scheduling can improve my academic performance.	98	43	7	2	Agreed

Source: Researcher's fieldwork, 2026

From table 5, item 1 above, 98 students (65.3%) and 41 students (27.3%) of the total respondents strongly agreed and agreed that timetable clashes affect their academic performance negatively. However, 11 students (7.3%) of the total respondents disagreed that timetable clashes affect their academic performance negatively.

Item 2 shows that 71 students (47.3%) and 66 students (44.0%) of the total respondents strongly agreed and agreed that poor scheduling affects my performance in tests and examinations. However, 11 students (7.3%) and 2 students (1.3%) of the total respondents disagreed and strongly disagreed that poor scheduling affects my performance in tests and examinations.

Item 3 shows that 69 students (46.0%) and 73 students (48.7%) of the total respondents strongly agreed and agreed that poor scheduling makes them feel academically stressed. However, 7 students (4.7%) and 1 student (0.7%) disagreed and strongly disagreed that poor scheduling makes them feel academically stressed.

Item 4 shows that 78 students (52.0%) and 63 students (42.0%) of the total respondents strongly agreed and agreed that timetable clashes affect their ability to concentrate during lectures. However, 8 students (5.3%) and 1 student (0.7%) of the total respondents disagreed and strongly disagreed that timetable clashes affect their ability to concentrate during lectures.

Item 5 shows that 98 students (65.3%) and 43 students (28.7%) of the total respondents strongly agreed and agreed that proper scheduling can improve their academic performance. However, 7 students (4.7%) and 2 students (1.3%) of the total respondents disagreed and strongly disagreed that proper scheduling can improve their academic performance.

Research Question Four: How does improper timetable scheduling affect the academic performance of Integrated Science students?

Table 7: Influence of Inter-Departmental Course Overlaps on Academic Performance of Science Students

S/N	Item	SA	A	D	SD	Remark
1	Taking courses from different departments increases timetable challenges for me.	104	43	3	0	Agreed
2	Lectures from different science departments often overlap.	58	84	7	1	Agreed
3	The workload from multiple departments makes scheduling more stressful.	79	64	7	0	Agreed
4	Timetable clashes affect how I balance courses from biology, chemistry, physics, and mathematics.	86	58	2	4	Agreed
5	Integrated Science students need better timetable coordination than single-department students.	106	44	0	0	Agreed

From table 4, item 1 above, 104 students (69.3%) and 43 students (28.7%) of the total respondents strongly agreed and agreed that taking courses from different departments increases timetable challenges for me. However, 3 students (2.0%) of the total respondents disagreed and that taking courses from different departments increases timetable challenges for me.

Item 2 shows that 58 students (38.7%) and 84 students (56.0%) of the total respondents strongly agreed and agreed that lectures from different science departments often overlap. However, 7 students (4.7%) and 1 students

(0.7%) of the total respondents disagreed and strongly disagreed that lectures from different science departments often overlap.

Item 3 shows that 79 students (52.7%) and 64 students (42.7%) of the total respondents strongly agreed and agreed that the workload from multiple departments makes scheduling more stressful. However, 7 students (4.7%) of the total respondents disagreed.

Item 4 shows that 86 students (57.3%) and 58 students (38.7%) of the total respondents strongly agreed and agreed that timetable clashes affect how they balance courses from biology, chemistry, physics, and mathematics. However, 2 students (1.3%) and 4 students (2.7%) of the total respondents disagreed and strongly disagreed that timetable clashes affect how they balance courses from biology, chemistry, physics, and mathematics.

Item 5 shows that 106 students (70.7%) and 44 students (29.3%) of the total respondents strongly agreed and agreed that Integrated Science students need better timetable coordination than single-department students. However, no student amongst the total respondents disagreed or strongly disagreed that Integrated Science students need better timetable coordination than single-department students.

Discussion of Findings

The findings revealed that a high proportion of the students experience timetable clashes during their academic activities. Most of the respondents indicated that lecture overlaps, conflicting schedules, and poorly coordinated academic activities occur regularly. This suggests that timetable clashes are a common challenge among Science Education students and constitute a significant issue within the institution.

The findings also showed that timetable clashes differ across academic levels. Students in the higher levels appeared to experience timetable clashes more frequently than those in the lower levels. This may be due to the increased number of courses, practical sessions, and academic responsibilities associated with higher levels of study.

The findings found out that timetable clashes vary across the different subject areas of Science Education. Students from Biology Education, Chemistry Education, and Integrated Science all reported experiencing timetable clashes. However, the challenge was more noticeable among Integrated Science students due to the multidisciplinary nature of their programme, which requires them to take courses from multiple departments.

The findings revealed that there is a slight difference in the academic performance of Integrated Science, Chemistry, and Biology students due to

their experience of timetable clashes. Although the differences in the mean scores were relatively small, they indicate that timetable clashes affect the academic performance of students in the three subject areas differently. This may be attributed to the multidisciplinary nature of the Integrated Science programme, which requires students to take courses across different science disciplines and departments. Consequently, Integrated Science students are more likely to encounter lecture overlaps, scheduling conflicts, and difficulties in managing their academic activities.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

This chapter presents the summary of the work, conclusions obtained from the analysis of the data, recommendations and suggestions for further studies.

- Summary
- Findings
- Conclusion
- Recommendations
- Contribution
- Suggestions for Further Studies

Summary

This study examined the impact of scheduling and timetable clashes on the academic performance of Integrated Science student and the study was carried out among Science Education students, particularly students from Integrated Science, Biology Education, and Chemistry Education. The study became necessary because timetable clashes and poor scheduling have become common challenges in higher institutions, especially among students who offer courses across different departments.

The study explained that timetabling is an important aspect of educational management because it helps organize academic and non-academic activities within the school system. However, when timetables are poorly planned, students may experience lecture overlaps, congested schedules, stress, poor concentration, and difficulty managing their academic activities well.

The study adopted the Time Management Theory as its theoretical framework because the theory explains how effective use and organization of time can influence productivity and performance. The theory was considered relevant because students who constantly experience timetable clashes may find it difficult to manage their academic time effectively.

The study was guided by five research questions. The study investigated the proportion of students who experience timetable clashes, whether timetable clashes differ across levels, whether they differ across subject areas in Science Education, whether timetable clashes affect male and female students differently, and how improper timetable schedules affect the academic performance of Integrated Science students.

A descriptive survey research design was adopted for the study. The population consisted of Science Education students, while a sample of 150 respondents was selected from Integrated Science, Biology Education, and

Chemistry Education students. The instrument used for data collection was a structured questionnaire designed by the researcher. The questionnaire was validated by the project supervisor who is an expert in the field of education. A pilot study was also conducted to determine the reliability of the instrument, and the Cronbach Alpha reliability coefficient obtained showed that the instrument was reliable for the study.

The data collected were analyzed using frequency counts, percentages, and mean scores. The findings of the study revealed that timetable clashes and poor scheduling significantly affect students academically and psychologically. The study further revealed that many students experience timetable clashes regularly and that these clashes contribute to stress, reduced lecture attendance, poor concentration, and poor academic performance.

Findings

Based on the analysis of the data collected, the following findings were made:

- The study found that a large proportion of students experience timetable clashes in their academic activities. Many students indicated that they often face lecture overlaps and scheduling conflicts during the semester.

- The study revealed that timetable clashes differ across academic levels. Students in higher levels, especially 300 and 400 level, appeared to experience more scheduling challenges because of increased academic workload and departmental course combinations.
- The findings also showed that timetable clashes occur across different subject areas among Science Education students. Integrated Science students were found to experience more timetable-related challenges because they offer courses from multiple science departments.
- The study discovered that timetable clashes affect both male and female students academically. However, the effects may differ slightly based on individual coping strategies and academic adjustment.
- The findings further revealed that improper timetable schedules negatively affect the academic performance of Integrated Science students. Students indicated that timetable clashes contribute to stress, missing lectures, poor reading habits, reduced concentration, and poor preparation for examinations.
- The study also found that poor scheduling affects students emotionally and psychologically. Many students reported feelings of frustration, tiredness, and academic pressure due to congested lecture schedules.

- Another important finding of the study was that effective scheduling can improve lecture attendance, time management, and students' overall academic performance.

Conclusion

Based on the findings of this study, it was concluded that scheduling and timetable clashes have significant effects on the academic performance of Integrated Science students. The study showed clearly that poor scheduling creates several academic challenges for students, particularly those in multidisciplinary programmes such as Integrated Science.

The nature of the Integrated Science programme exposes students to courses from different departments, which then increases the possibility of timetable conflicts and lecture overlaps. These clashes make it difficult for students to attend lectures effectively, manage their time properly, and prepare adequately for academic activities.

The study also concluded that timetable clashes contribute to stress, academic frustration, reduced concentration, and poor learning outcomes among students. Students who constantly experience scheduling conflicts may gradually lose motivation and become academically overwhelmed.

Furthermore, the study established that effective timetabling is essential for promoting smooth academic activities within higher institutions. A well-organized timetable helps students manage their academic responsibilities effectively and creates a better learning environment for both students and lecturers.

Therefore, educational administrators and departmental timetable officers must give serious attention to proper scheduling and coordination of academic activities in order to reduce timetable clashes and improve students' academic performance.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. University management and departmental administrators should ensure proper coordination during timetable preparation in order to reduce lecture overlaps and scheduling problems.
2. Departments within Science Education should collaborate effectively with other departments when preparing lecture schedules, especially for Integrated Science students who offer courses across multiple departments.

3. Institutions should adopt the use of computerized timetabling systems to minimize human errors and improve scheduling accuracy.
4. Adequate lecture halls and laboratory facilities should be provided to reduce congestion and improve effective scheduling of academic activities.
5. Lecturers and timetable officers should always consider students' workload and convenience when preparing lecture schedules.
6. Academic activities should be arranged in a very organised and balanced way to prevent students from becoming mentally and physically exhausted.
7. University authorities should regularly review academic timetables and make necessary adjustments where conflicts such as clashes are identified.
8. Students should also be encouraged to develop effective time management skills in order to cope better with academic workloads.

Contribution to Knowledge

This study contributed to existing knowledge by providing more understanding on how scheduling and timetable clashes affect the academic performance of Integrated Science students.

The study specifically contributed to knowledge in the following ways:

- It highlighted the unique scheduling challenges faced by Integrated Science students because of the multidisciplinary nature of their programme.
- The study provided empirical evidence showing the relationship between timetable clashes and students' academic performance.
- It contributed to literature on educational management by explaining how poor scheduling affects students emotionally, psychologically, and academically.
- The study also emphasized the importance of effective timetable coordination in improving lecture attendance, student engagement, and their overall academic performance.
- The findings of the study may help educational administrators, lecturers, and policymakers develop better scheduling strategies within higher institutions.

Suggestions for Further Studies

The following suggestions were made for further research:

1. Similar studies should be conducted in other faculties and departments to know whether timetable clashes affect students in the same way.

2. Future researchers may also investigate the relationship between timetable clashes and students' mental health or emotional well being.
3. Researchers can also examine the effects of computerized timetabling systems on academic effectiveness in Nigerian universities.
4. Further studies may compare scheduling challenges between public and private universities.
5. Future research may also focus on lecturers' experiences and challenges regarding timetable preparation and scheduling problems.

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APPENDIX I

QUESTIONNAIRE

IMPACT OF SCHEDULING AND TIMETABLE CLASHES ON ACADEMIC PERFORMANCE OF INTEGRATED SCIENCE STUDENTS

Dear Respondents,

The researcher is conducting a study on the above topic. This research is strictly for academic purposes and any information provided will be treated as highly confidential and will be used for the purpose of this research work only.

Thanks for your cooperation.

RESEARCHER

Section A: Demographic Information

1. Gender: Male () Female ()
2. Level: 100 Level () 200 Level () 300 Level () 400 Level ()
3. Course of Study: Biology () Chemistry () Integrated Science ()
4. Have you experienced timetable clashes before? Yes () No ()

Section B: Scheduling and Timetable Clashes

Please indicate your level of agreement with the following statements.

Key: SA – Strongly Agree, A – Agree, D – Disagree, SD – Strongly Disagree

Section C: Scheduling Challenges and Timetable Clashes

S/N	ITEM	SA	A	D	SD
1.	I often experience clashes between two or more courses on my timetable.				
2.	Some compulsory Integrated Science courses are scheduled at the same time				
3.	Lectures are sometimes fixed without proper coordination between departments				
4.	My timetable is often congested with too many lectures in one day				
5.	Poor scheduling makes it difficult for me to attend all my lectures				

6.	Timetable clashes reduce my motivation to attend lectures regularly				
7.	I feel discouraged when I have to choose between two clashing courses				
8.	Poor scheduling makes me feel academically stressed				
9.	Timetable problems affect my interest in some Integrated Science courses				
10.	A well-organized timetable motivates me to study better				
11.	Taking courses from different departments increases timetable challenges for me				
12.	Lectures from different science departments often overlap				
13.	The workload from multiple departments makes scheduling more stressful				
14.	Timetable clashes affect how I balance courses from biology, chemistry, physics, and mathematics				
15.	Integrated Science students need better timetable coordination than single-department students				

Section D: Timetable Clashes and Academic Performance

S/N	ITEM	SA	A	D	SD
1.	Timetable clashes affect my academic performance negatively				
2.	Missing lectures due to timetable clashes affects my understanding of courses				
3.	Poor scheduling affects my performance in tests and examinations				
4.	Timetable clashes affect my ability to concentrate during lectures				
5.	Proper scheduling can improve my academic performance				