# THE IMPACT OF MAINTENANCE QUALITY ON ACADEMIC PERFORMANCE IN UNIVERSITY OF BENIN ON-CAMPUS HOSTELS

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**FEBRUARY 2025**

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**A RESEARCH DISSERTATION SUBMITTED TO THE DEPARTMENT OF ESTATE MANAGEMENT, FACULTY OF ENVIRONMENTAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY.**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF SCIENCE (B.Sc.) DEGREE IN ESTATE MANAGEMENT.**

**SUPERVISOR: DR. MARKSON OPEYEMI KOMOLAFE**

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## DECLARATION

I, **OKOEDO BARRY EGHOSE,** a student of the Department of Estate Management, Faculty of Environmental Sciences, University of Benin, Edo State, hereby declare that the work in this thesis entitled **"THE IMPACT OF MAINTENANCE QUALITY ON ACADEMIC PERFORMANCE IN UNIBEN ON-CAMPUS HOSTELS"** has been carried out by OKOEDO BARRY EGHOSE (ENV 1905966) and submitted in partial fulfillment of the requirements for the degree of Bachelor of Science in the Department of ESTATE MANAGEMENT. The information derived from the literature has been duly acknowledged in the text, and a list of references is provided.

13/05/25

**OKOEDO BARRY EGHOSE** **DATE**



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## CERTIFICATION

This is to certify that this research project is an original work undertaken by OKOEDO BARRY EGHOSE (ENV 1905966) under the supervision of Dr. Markson Opeyemi Komolafe and has been prepared in accordance with the regulations governing the preparation of projects in the Department of Estate Management, University of Benin. This project has been read and approved by:

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**(Supervisor)**

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**(Head of Department)**

**PROF M.B OGUNLEYE** 13/05/2025 **DATE** 13/5/25

**(External Examiner)**



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## DEDICATION

This research project is dedicated to Almighty God and my lovely family.

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## ABSTRACT

The quality of building maintenance in on-campus student hostels plays a critical role in shaping students' academic experiences and overall well-being. This study examines the impact of hostel maintenance practices on the academic performance of students at the University of Benin (UNIBEN), Nigeria. A combination questionnaires and interviews were administered; data were collected from hostel residents and maintenance managers to assess the effectiveness of maintenance practices and their influence on student outcomes. A total of 180 students were sampled from two hostels, with responses analyzed using descriptive statistics, one-sample t-tests, and multiple regression analysis.

Findings reveal that while routine and corrective maintenance practices are in place, their effectiveness is limited by resource constraints, delayed responses, and poor implementation. Key maintenance challenges include inadequate water supply, poor sanitation, faulty plumbing, and inefficient waste disposal, all of which were perceived as negatively impacting students' living conditions. Regression analysis shows a significant positive relationship between students' academic performance (measured by CGPA) and their perception of hostel maintenance effectiveness, particularly in areas such as restroom condition, water supply, and overall maintenance quality.

The study concludes that improving hostel maintenance through proactive strategies, increased resource allocation, and efficient management practices can enhance students' academic success. Recommendations include the adoption of preventive maintenance measures, digital reporting systems for maintenance issues, and improved supervision of facility management personnel. These findings contribute to the broader discourse on student housing quality and its implications for academic performance in public tertiary institutions.

# CHAPTER ONE

# INTRODUCTION

## 1.0 Background to the Study

Management success is essentially measured by the extent to which it can maximize expected return, some of which could be pecuniary, some non-pecuniary and others, a combination of both. For students' hostels, especially those provided on-campus, it is usually a combination of both. While targeting the achievement of education goals of institutions, educational institutions also want to ensure that they at least break even on their investment. There therefore seems to be both primary and secondary purposes of management for on-campus student hostels. For private tertiary institutions, financial performance may likely be the priority but for public tertiary institutions, achievement of educational goals is likely primary.

Building maintenance is an important aspect of management as it is tangential to comfort and livability which is linked to student hostel experience and resultantly, their academic performance (Kowalski, 2022). The relationship between the two (building maintenance quality and academic performance) is largely understudied in existing literature.

The need to particularly focus on maintenance is spurred by the increasing student enrolment in public tertiary institutions. This puts pressure on the available hostel facilities to cater for the increasing student and pose a lot of maintenance challenges on the hostels. A number of questions arise from this scenario. Are the housing facilities still taking the specified number of users? If they are not, what efforts are being made to manage the increased pressure on the existing facilities? How adequate are these measures and what is the resultant impact on the academic performance of the students? In thus study, these questions are intended to be addressed, making particular reference to a prominent public tertiary institution in the South southern Nigeria- Benin City.

## 1.1 Statement of the Research Problem

The quality of on-campus hostel maintenance plays a significant role in shaping the living environment for students, which in turn can impact their academic performance. At the University of Benin, Nigeria, the rising student enrollment has intensified the pressure on existing hostel facilities, highlighting the need for effective maintenance practices. Maintaining high standards of hostel facilities is essential for ensuring a conducive living environment, which is crucial for students' well-being and academic success. However, there

is a notable gap in the literature regarding the direct impact of hostel maintenance quality on academic outcomes within this specific context.

Well-maintained living environments contribute positively to students' academic performance by providing a comfortable and functional space for study and relaxation. Poor maintenance, conversely, can lead to a range of issues such as inadequate lighting, poor sanitation, and unreliable utilities, which can negatively affect students' health, comfort, and academic productivity (Idiang *et al.,* 2022). These factors collectively impact students' ability to concentrate, manage their time effectively, and engage with their academic work, potentially leading to diminished academic performance. Investigating these relationships at the University of Benin will provide valuable insights into the effectiveness of current maintenance practices and their impact on students' academic achievements.

There is particular need to explore how maintenance issues such as leaks, faulty electrical systems, and general wear and tear in hostel facilities impact students' study habits and academic engagement. Additionally, students' perceptions of hostel maintenance and its influence on their academic performance warrant investigation. Students' subjective experiences and evaluations of their living conditions can offer important perspectives on how maintenance quality affects their academic engagement and success. The following questions are therefore relevant to addressing hostel maintenance issues in connection to academic performance of students in UNIBEN:

## 1.2 Research Questions

- What are the maintenance practices in UNIBEN on-campus hostels?
- What is the students' assessment of the maintenance practices?
- What are the impacts of these maintenance practices on the academic performance of the students?

## 1.3 Aim and Objectives of the study

The aim of the study is to examine the impact of hostel maintenance practices on the academic outcomes of UNIBEN students. This is with a view to providing information that could contribute to improving hostel management strategies and enhancing the overall academic environment for students.

The specific objectives are to:

1. Assess the current maintenance practices implemented in UNIBEN on-campus hostel facilities.
2. Evaluate students' perception of the effectiveness of maintenance practices in UNIBEN on-campus hostels.
3. Analyze the relationship between students' perception of hostel maintenance effectiveness and their academic performance.

## 1.4 Justification of the study

The increasing student population at the University of Benin, Nigeria, has placed significant pressure on the institution's on-campus hostel facilities, making the quality of maintenance a critical issue. Given the vital role that living conditions play in shaping students' academic experiences and outcomes, this study is essential for several reasons.

High-quality maintenance of hostel facilities directly influences students' academic performance. Well-maintained environments provide essential comforts and functional spaces that are conducive to studying and relaxation. Conversely, maintenance issues such as poor sanitation, inadequate lighting, and unreliable utilities can disrupt students' ability to focus on their studies and maintain good health. Research by Hall *et al.* (2021) highlights that proactive maintenance practices can enhance student satisfaction and academic performance by ensuring a supportive living environment. Understanding this relationship at the University of Benin will help in formulating strategies to improve maintenance practices, thereby potentially enhancing academic outcomes.

The rising number of students at the University of Benin has intensified the demand on existing hostel facilities, leading to potential maintenance challenges. Effective management of these facilities is crucial to accommodating the growing student population without compromising the quality of living conditions. This study is justified as it will identify specific maintenance issues and evaluate how these issues impact students' study habits and academic performance. Insights gained will inform the development of targeted maintenance strategies to better manage the increased pressure on hostel facilities, thus ensuring that they continue to meet students' needs effectively.

This study will provide valuable evidence on the impact of hostel maintenance quality on academic performance, which is crucial for informing policy and management practices at the University of Benin. By investigating current maintenance practices and their effectiveness, the study will offer recommendations for improving maintenance standards and

addressing prevalent issues. This is particularly important in the context of public tertiary institutions where resource allocation must balance financial constraints with the need to support students' academic success.

Maintaining high-quality hostel facilities is not only about ensuring comfort but also about supporting students' overall well-being. Research has shown that poor living conditions can adversely affect students' psychological health and academic motivation (Miller & Schuster, 2017). By examining how maintenance quality impacts students' well-being and academic performance, the study will highlight the importance of creating a supportive living environment. This focus aligns with the broader goal of fostering a positive academic experience and enhancing student success.

There is a gap in the literature concerning the specific impact of hostel maintenance quality on academic performance within the context of Nigerian public universities. While existing studies have explored related aspects in other settings, research tailored to the unique conditions and challenges faced by institutions like the University of Benin is limited. This study will bridge this gap by providing context-specific insights and contributing to the broader discourse on the relationship between living conditions and academic performance.

The findings from this study will have practical implications for university management, facilities staff, and policy makers. By identifying key maintenance issues and their impact on academic performance, the study will offer actionable recommendations for improving hostel management practices. This will help in developing effective maintenance strategies that not only enhance living conditions but also support students' academic achievements.

In conclusion, this study is justified as it addresses a critical issue affecting student life at the University of Benin, with potential benefits for both the institution and its students. By investigating the relationship between hostel maintenance quality and academic performance, the research will contribute valuable insights for improving hostel management and enhancing the overall student experience.

## 1.5 Scope of the Study

The research will be confined to the University of Benin, located in Benin City, Nigeria. This institution is selected due to its significant student population and the associated challenges in maintaining hostel facilities. The findings will be specific to this context, although they may offer insights applicable to similar public tertiary institutions in Nigeria and potentially other similar settings.

The primary focus will be on undergraduate students residing in on-campus hostels at the University of Benin. The study will include students from various faculties and years of study to ensure a comprehensive understanding of how maintenance quality impacts different student groups. Additionally, the research will involve hostel management staff and maintenance personnel to gather insights into current maintenance practices and challenges.

The study will not cover off-campus housing conditions or maintenance practices outside of the University of Benin. It will also not delve into the financial aspects of hostel management or broader institutional policies beyond the scope of maintenance quality.

In summary, the scope of this study is to explore how the quality of maintenance in on-campus hostels at the University of Benin affects student academic performance, using a range of data collection methods to provide a comprehensive analysis within the defined geographical and institutional context.

## 1.6 Study Area

The University of Benin (UNIBEN) is a prominent public tertiary institution located in Benin City, Edo State, Nigeria. Established in 1970, it is one of the largest and most prestigious universities in the country, known for its diverse academic programs and significant student population. The university operates a comprehensive range of undergraduate and postgraduate programs across various faculties, including Engineering, Medicine, Social Sciences, Arts, and Sciences.

The University of Benin campus is situated within a large expanse of land in Benin City, characterized by its well-organized layout. The campus is divided into multiple zones, each dedicated to different academic and administrative functions. Key areas include academic blocks, administrative offices, research centers, and residential facilities. The campus is equipped with various amenities aimed at supporting both academic and extracurricular activities.

The University of Benin provides on-campus accommodation primarily through its hostel facilities, which are spread across different locations within the campus. These hostels are designed to house a significant portion of the student population, offering various types of accommodation, including single and shared rooms. The hostel facilities are equipped with essential amenities such as electricity, water supply, sanitation services, and common areas for study and recreation.

The rapid increase in student enrollment has placed considerable pressure on the university's hostel facilities, leading to several maintenance challenges. Common issues include wear and tear of infrastructure, such as leaking roofs, malfunctioning electrical systems, and inadequate sanitation. The growing demand for accommodation has further exacerbated these problems, making effective maintenance a critical concern.

The student body at the University of Benin is diverse, comprising undergraduates from various faculties and levels of study. The on-campus hostels are home to a significant portion of these students, providing them with a living environment that is integral to their academic experience. The student population is characterized by its varied academic interests and backgrounds, which can influence their perceptions of and responses to maintenance quality.

The University of Benin has a dedicated facilities management team responsible for overseeing the maintenance of hostel and campus facilities. This team is tasked with addressing maintenance issues, managing repair works, and implementing preventive measures to ensure that hostel conditions meet acceptable standards. Despite these efforts, the increasing student numbers present ongoing challenges that necessitate continuous improvement in maintenance practices.

The study area is influenced by several contextual factors, including the local climate, which can affect the durability and maintenance needs of hostel facilities. The humid and rainy climate in Benin City can exacerbate issues such as mold growth and structural degradation. Additionally, budgetary constraints and resource allocation challenges impact the university's ability to address maintenance needs effectively.

In summary, the University of Benin is a significant educational institution with a large and growing student population. The campus, including its hostel facilities, faces maintenance challenges that impact the quality of living conditions for students. This study area is characterized by its need for effective management of hostel maintenance to support students' academic performance and overall well-being.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Building Facility and Its Components

Buildings are complex structures comprising various interconnected elements (Mc Duling, Harok & Cloete, 2004; Adenuga, 2010). They include two primary components: the building shell and building services (Odediran et al., 2012). The building shell encompasses all architectural and structural elements that protect the interior from environmental conditions while providing thermal and acoustic insulation. Materials used for façades must be durable, stable, and fire-resistant, while also maintaining aesthetic value (Chew, 2010). Building services, which include mechanical and electrical systems, cover plumbing, electrical power, lighting, fire protection systems, mechanized transport, and HVAC systems (Chew, 2010).

A building's lifecycle involves three main stages: design and construction, operation and maintenance, and deconstruction (Buys, 2004; Chan, 2014). Each component has unique durability and maintenance needs (Mclean, 2009). The overall lifespan of a building is influenced by factors such as construction quality, material compatibility, usage, and maintenance practices (Adenuga et al., 2010).

## 2.2 Deterioration and Common Defects in Buildings

The primary role of a building is to offer a structurally sound, safe, and environmentally controlled environment for various human activities (Idrus, Khamidi & Abdul Lateef, 2009; Adenuga et al., 2010; Abdul Lateef, Khamidi & Idrus, 2011; Waziri & Vanduhe, 2013). To effectively fulfill this role, a building must possess qualities such as durability and reliability while meeting the needs of its occupants (Abdul Lateef et al., 2011). Although some level of deterioration and depreciation in buildings is unavoidable, proper maintenance strategies can significantly slow down this process.

Building materials, such as clay, sand, wood, and stone, are naturally occurring substances (Adinarayana, 2011). These materials can deteriorate over time regardless of whether the building is in use or not, with weathering playing a significant role in this process. The deterioration of materials involves various chemical, mechanical, and biological reactions, leading to issues like wear, tear, soiling, fading, peeling, cracking, and corrosion (Iyagba, 2005; Straub, 2009). The Queensland Department of Housing and Public Works (2012)

defines building defects as physical deterioration of building elements and services, affecting their operational efficiency, appearance, and safety for occupants.

Factors accelerating deterioration include improper use, inadequate maintenance, and lack of knowledge about proper building care (Davatakovic & Radojevic, 2007). Common causes of deterioration are aging, wear and tear, and the effects of both artificial and natural environmental conditions (Iyagba, 2005).

In cases of rapid structural decline, Adenuga et al. (2010) identify several contributing factors:
- Faulty or inappropriate design
- Inadequate selection of materials and components
- Poor workmanship
- Insufficient maintenance strategies
- Misuse or abuse of the building

Saghatforoush, Trigunarsyah & Too (2012) classify maintenance and their generators into five categories, as detailed in Table 2.1.

**Table 2.1: Categories Maintenance**

| Factors | Maintenance Generators |
|---|---|
| Technical | • faulty design or construction or both can result in defects in the building<br>• poor quality of material and workmanship during initial construction phase<br>• building facilities are subjected to wear and tear when in use<br>• ageing is inevitable, whether the building is in use or not, therefore, there are defects or deterioration that are related to the age of the building<br>• poor quality of material and workmanship when undertaking maintenance works; supported by Adenuga *et al.* (2010, p. 95) |
| Managerial | • lack of maintenance policies<br>• inadequate maintenance programmes<br>• In cases where the maintenance policies and programmes are available, there may be a problem of implementation<br>• Delay of maintenance works (a stitch in time saves nine)<br>• Inadequate budgeting for maintenance works<br>• Insufficient resources for maintenance, creating a maintenance backlog<br>• Poor information and communication technology in the organisation<br>• Lack of strategic plans for maintenance management of the building |
| Environmental | • Biological (termites)<br>• chemical reactions (oxidation)<br>• The weather and climatic conditions, such as flood, the wind<br>• *Force majeure*, such as fire |
| Political | • Legal constraints<br>• Lack of political consistency<br>• Government Policies |
| Socio-cultural | • Dominant maintenance culture of the occupants/users of the building<br>• Ignorance of the occupants/users on the operation of the components<br>• Misuse of the building<br>• Exceeding the designed performance capability and capacity of the building<br>• Vandalism; also identified by Davatakovic & Radojevic (2007, p. 127) and Adenuga, *et al.*, (2010, p. 84). |

***Source:*** *Saghatforoush, Trigunarsyah & Too (2012)*

## 2.3 Building Condition Assessment

The condition of buildings is a crucial indicator of both community development and quality of life, reflecting societal prosperity, values, and behaviors (Akinsola et al., 2012; Odediran et al., 2012). Buildings are expected to accommodate various user needs, whether simple or complex (Idrus et al., 2009). Effective maintenance management is essential for maintaining building performance and extending the lifespan of facilities (Zawawi et al., 2011).

Assessing maintenance needs involves understanding the gap between a facility's current condition and its desired state (Abbott et al., 2007). Condition assessments are the most common method for evaluating building performance and identifying maintenance requirements. This process helps determine the effectiveness of current maintenance strategies (Abbott et al., 2007).

Developing performance measurement tools, such as condition rating instruments, is key to establishing a global framework for building assessment (Abbott et al., 2007). Currently, assessment tools are often tailored to specific building types, environments, and survey purposes (Loy & Coleman, 2006). Condition assessments offer a snapshot of a facility's relative state and provide essential data for prioritizing and planning maintenance actions aligned with organizational goals and user needs (Loy & Coleman, 2006).

## 2.4 Purpose of Building Maintenance

Maintaining buildings is crucial not only for their economic longevity but also for the well-being of their occupants (Iyagba, 2005). Proper maintenance is a vital intervention for preserving the value of the built environment and supporting its users (Dann et al., 2005; Idrus et al., 2009).

Maintenance is a key factor in ensuring building performance, maintaining functional, structural, and aesthetic conditions throughout a building's life (Abdul Lateef et al., 2010; Olanrewaju, 2013). It enhances safety and improves the quality of life for occupants (Buildings Department, 2005). Regardless of a facility's type, size, function, or complexity, effective maintenance management is crucial for maintaining or restoring acceptable standards with available resources (Lee & Scott, 2009).

Maintenance management processes involve coordinating efforts to retain a facility's desired characteristics, which supports optimal performance throughout its functional life (Odediran et al., 2012). Although these processes can be complex and demanding, they are essential for safeguarding occupants and preserving the economic value of properties (Suffian, 2013).

## 2.5 Overview of Building Maintenance Practices

Maintenance significantly impacts the reliability and safety of buildings (Abdul Lateef et al., 2010). Well-defined maintenance strategies are essential for keeping facilities in optimal condition (Buys & Nkado, 2006). Despite its importance, maintenance often lacks the attention it deserves in the construction industry, as it is seen as less glamorous compared to new construction projects (Cloete, 2002; Wood, 2003; Lee & Scott, 2008; Lee & Scott, 2009).

Maintenance tasks are frequently viewed as a misuse of resources that could be allocated elsewhere (Adenuga et al., 2010). Neglecting maintenance can have less visible short-term consequences, leading management to reduce maintenance budgets (Mc Duling et al., 2004). In the UK, Chanter & Swallow (2007) observed a decline in the condition of educational buildings since the 1980s, attributing it to resource constraints. Similarly, the UN Centre for Human Settlements found that many developing countries lack effective maintenance management systems (Adenuga et al., 2010).

Furthermore, Bowazi & Buys (2009) noted that developing countries often lack adequate maintenance policies, while Cloete (2002) reported that information on building conditions and maintenance needs is often inaccurate and unreliable. In South Africa, maintenance management is not prioritized in many tertiary institutions (Buys & Nkado, 2006).

## 2.6 Consequences of Neglecting Building Maintenance in Nigeria

In Nigeria, building maintenance is often neglected and considered the 'Cinderella' of the construction industry (Iyagba, 2005). This neglect is a significant factor in infrastructure failures within the country (Omoregie et al., 2005). Studies reveal generally poor maintenance of the built environment (Adejimi, 2006; Adenuga et al., 2010; Ilesanmi, 2010). According to Abigo et al. (2010), public buildings in Nigeria are increasingly unsafe for occupants. A comparison with the UK shows:

- 41% of respondents in Nigeria viewed their buildings as being in good condition, compared to 95% in the UK.

- Only 12% of Nigerian respondents reported using a maintenance model, while 88% of UK respondents indicated their organizations had implemented maintenance models.

## 2.7 Functions and Components of Maintenance Management

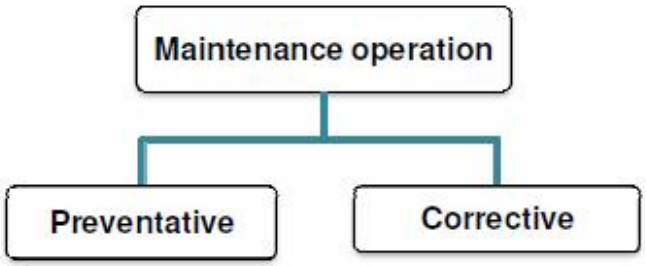
Maintenance management encompasses both operational and managerial functions. Operational tasks require technical skills, while managerial functions involve decision-making about "what and how to decide" (Pintelon & Parodi-Herz, 2008). Effective maintenance management is supported by a clear understanding of an organization's mission and vision, which helps set appropriate maintenance standards and policies.

However, maintenance personnel often focus on technical issues and may not align with strategic goals (Lee & Scott, 2009). Therefore, understanding the relationship between strategic management and operational maintenance personnel is essential for effective building maintenance.

### 2.7.1 Operational Function

The operational aspect of maintenance involves various tasks aligned with a maintenance policy (Marquez & Gupta, 2006). These tasks aim to achieve the maintenance objectives set by the organization for its facilities and services (Abdul Lateef et al., 2010). Maintenance tasks can be corrective (addressing issues after they occur) or preventive (anticipating and preventing potential failures) (McLean, 2009). Maintenance activities include service, rectification, or replacement (Buys, 2004; Olagunju, 2011).

**Figure 2.1**




***Source: McLean, 2009***

1. Preventive Maintenance: To effectively plan preventive maintenance, it's crucial to clearly define the facility's function and anticipate potential failure patterns. Tasks should be

determined with a focus on safety and cost efficiency (Marquez et al., 2009). The characteristics of preventive maintenance include:

- It is scheduled and performed with the expectation of preventing breakdowns (Waziri & Vanduhe, 2013).
- It involves pre-scheduled services aimed at minimizing the risk of failure before it occurs (Akin & Gürsel, 2005; Olagunju, 2011).
- It is time-based, requiring the identification of potential issues through inspections and early detection, followed by problem resolution through activities such as cleaning, testing, lubrication, and other scheduled services.

2. Corrective Maintenance: In contrast to preventive maintenance, corrective maintenance is carried out after a failure has occurred (Pintelon & Parodi-Herz, 2008). Often termed "run-to-failure," this type of maintenance involves addressing issues only after they arise (Akin & Gürsel, 2005; Lind & Muyingo, 2011; Olagunju, 2011). The primary activities involved are repairs or replacements designed to fix the failure and restore the system to its normal operation (Pintelon & Parodi-Herz, 2008).

### 2.7.2 Maintenance Managerial Process

The management of maintenance involves strategic planning based on the goals set by an organization relative to its maintenance objectives and standards. This function uses fundamental management principles such as planning, controlling, coordinating, and organizing to integrate various maintenance components through sub-functions like program development, communication, and budgeting. It also focuses on the efficient allocation and utilization of resources (Zulkarnain et al., 2011).

## 2.8 Maintenance Policy

A maintenance policy is a documented framework that outlines how a facility should be maintained in alignment with an organization's goals (Lee & Scott, 2009a). It establishes the rules, practices, guidelines, and procedures for resource utilization across different operational approaches available to managers. Key elements to consider when developing a maintenance policy include:

- The organization's maintenance aims and objectives, which define the authority limits and responsibilities for maintenance personnel.
- The maintenance standards established by management.

- The statutory requirements imposed by local authorities.
- Cost objectives.
- Methods for executing maintenance tasks (Lee & Scott, 2009b).

A well-defined policy helps management clarify its maintenance strategy and coordinate activities to optimize performance within the available resources (Lee & Scott, 2009a).

### 2.8.1 Types of Maintenance Policies

Maintenance policies can be categorized into those for single units and those for multi-unit systems. Wang (2002) provides detailed descriptions of these policies, which are summarized as follows:

### 2.8.2 Single Unit Policies:

1. Age-Dependent Preventive Maintenance Policy: Maintenance is performed at a set interval, with additional maintenance if failure occurs before the scheduled time.
2. Failure Limit Policy: Maintenance is carried out only when failure rates or reliability indices reach a predetermined level.
3. Sequential Preventive Maintenance Policy: Maintenance is performed at progressively shorter intervals after each operation.
4. Repair Limit Policy: Decisions are based on the cost efficiency of repairs compared to component replacement.
5. Repair Number Counting and Reference Time Policy: Combines repair counts and elapsed time to guide maintenance decisions.

### 2.8.3 Multi-Unit System Policies:

For multi-unit systems, where numerous identical units are used with varying life spans and negligible salvage values, the focus is on maintaining interrelated subsystems. One unit's failure may present an opportunity to maintain other units. Key policies include:

1. T-Age Group Maintenance Policy: Similar to the age-dependent policy for single units.
2. M-Failure Group Replacement Policy: Requires system inspection after a specified number of failures and repairs.
3. (M, T) Group Replacement Policy: Integrates both T-Age and M-Failure policies.

Maintenance Strategies

Maintenance strategies are essential at all organizational levels and can be broad/long-term for corporate goals or specific/short-term for individual units (Nickols, 2011). Developing an effective strategy can be challenging due to resource constraints (Tse, 2010), but many managers engage in strategic planning to reap the benefits (Nickols, 2012). Maintenance managers typically design strategies that impact operational functions, user satisfaction, and maintenance backlogs (Abdul Lateef, 2010).

A proactive maintenance strategy involves pre-planned activities based on best practices and organizational policies, whereas a reactive strategy is unplanned and driven by unscheduled events. Proactive strategies use various techniques to optimize facility life and reduce failure rates (Khazraei & Deuse, 2011). Factors such as organizational strategic objectives, standards, and available resources influence in-house maintenance strategies (Lee & Scott, 2008). Building type and available resources also affect maintenance strategies (Lee & Scott, 2008; 2009b).

## 2.9 Maintenance Objectives

Maintenance objectives, derived from organizational values and user needs, are crucial for managing maintenance both strategically and operationally (Abdul Lateef et al., 2011). These objectives support senior management's interest in building performance and include:

- Preventing health and safety hazards caused by dangerous materials or structural failures.
- Meeting specific user preferences regarding facility design and finishes.
- Retaining or enhancing property value.
- Complying with statutory and contractual obligations.
- Preventing local area degradation.
- Extending the useful life of property.
- Minimizing inconvenience or discomfort.
- Avoiding vacancies or underuse.
- Ensuring facilities support core activities of users and the organization.
- Maintaining aesthetic values (Abdul Lateef et al., 2010; Overveen, 2011; Olagunju, 2011).

## 2.10 Maintenance Standards

Maintenance standards define the acceptable quality levels for maintenance services, ensuring that buildings meet specific physical, functional, and economic criteria set by the owner organization (Abdul Lateef et al., 2010; Olagunju, 2011). Standards act as benchmarks for measuring performance and are influenced by financial resources, building functionality, and environmental factors (Olagunju, 2011). The standards for different types of buildings—such as hotels versus student hostels—vary significantly based on their function, image, and value (Lee & Scott, 2009a).

Management may struggle with setting consistent standards due to varying perceptions and subjective judgments. Nonetheless, a clear understanding of building procurement and maintenance objectives is crucial for establishing effective standards (Lee & Scott, 2009a). The status of a maintenance department often reflects the strategic importance an organization places on maintaining its buildings (Chanter & Swallow, 2007). Organizations that recognize the strategic value of maintenance integrate it into their overall management approach (Lee & Scott, 2008).

The condition of built environments is a key indicator of community development and quality of life, reflecting prosperity, social values, and behaviors (Akinsola et al., 2012; Odediran et al., 2012). Effective maintenance is crucial not only for the economic longevity of buildings but also for the well-being of their occupants (Iyagba, 2005), making it a vital intervention for preserving the built environment and supporting its users (Dann et al., 2005; Idrus et al., 2009).

## 2.11 On-Campus Student Accommodation at Universities

University-provided student hostels are crucial for promoting rapid personal and academic development, aligning with the broader goals of social and economic advancement. On-campus housing has a long history, dating back to the 14th century. For example, Al-Azhar University in Cairo, established in 969 AD, was one of the early universities to offer such accommodations (Hassanian, 2008). These hostels are considered dynamic facilities (Lee & Scott, 2009) due to their transient nature (Thomsen & Eikemo, 2010). They are specifically designed to offer supervised living environments that foster social interaction among students from diverse backgrounds (Najib & Osman, 2011). This setup supports character

development, behavioral growth, and intellectual competence (Hassanain, 2008). Additionally, on-campus hostels are valued for their security and affordability, which contributes to better academic performance compared to off-campus living (Araujo & Murray, 2010; Araujo, 2010).

## 2.12 Academic performance

Academic performance refers to the extent to which students excel in their courses, subjects, or programs. Often termed academic achievement, it signifies the outcomes that reflect how well a student has met specific goals set within educational settings (Steinmayr, Meibner, Weidinger & Wirthwein, 2015). In higher education, success and achievement are frequently measured by the cumulative grade point average (CGPA) at the end of a semester or program (Muslim, Karim, & Abdullah, 2012; Baharin et al., 2015; Ranjandran et al., 2015).

Numerous studies have investigated the factors influencing academic performance across various locations and contexts. Academic performance is influenced by a multitude of factors and varies based on the study sample and context, leading to diverse results. For instance, Baharin et al. (2015) found a significant link between family characteristics and academic performance in Johor, Malaysia, which aligns with findings from Ethiopia, where parental education levels impacted female students' academic performance (Tiruneh & Petros, 2014).

However, findings regarding student characteristics are often inconsistent. This inconsistency can be attributed to the challenge of controlling all variables affecting academic success (Thiele, Singleton, Pope, & Stanistreet, 2016). While Mersha et al. (2013) and Tiruneh & Petros (2014) observed that aspects of the school environment, such as teacher roles and off-campus facilities, negatively affected female undergraduate performance in Ethiopia, Ranjandran et al. (2015) found that gender was not a significant factor in determining first-year students' academic performance in Malaysia. They identified entry qualifications as the strongest predictor of CGPA for first-year students (ibid, p. 58). Similarly, Fields (1991) found previous academic performance to be the most influential variable on student success. This is corroborated by a recent study of British graduates, which found that males enter university with lower grades than females and are less likely to achieve high academic distinctions (Thiele et al., 2016, p. 1432). Additionally, females outperformed males in a core architectural course (Opoko, Alagbe, Aderonmu, Ezema, & Oluwatayo, 2014). In contrast, Adewale & Adhuze (2013) found a low correlation between entry qualifications (in Mathematics and Physics) and academic performance among architecture students in Nigeria. Enthusiasm and prior knowledge of renowned architects were found to impact design

performance among first-year students in Turkey (Kirci & Yildirim, 2013). Other student characteristics affecting academic performance include emotions, self-perception, self-regulated learning, and motivation (Tiruneh & Petros, 2014; Mega, Ronconi, & De Beni, 2014). Teaching methods were also noted to play a role in maintaining academic performance in core architecture courses (Afolami, Olotuah, Fakere & Omale, 2013).

The relationship between academic performance and university features, such as accommodation and faculty characteristics, also varies by location and sample. Baharin et al. (2015) found a significant correlation between academic performance and university features in Malaysia, attributing it to the proximity, accessibility, and quality of physical facilities, including libraries and classrooms, as well as IT services provided by UiTM. Conversely, Mersha et al. (2013) noted that higher education institutions often stratify based on prestige and status, which can influence academic outcomes (p. 144). Nchungo (2013) identified inadequate student accommodation as a factor affecting 82.5% of undergraduate students at the University of Zambia.

### 2.13 Impact of Accommodation Facilities on Academic Performance

The 1955 Southeast Asia Conference in Madras, cited by Nabawanuka (1997), highlighted the crucial role of accommodation in enhancing students' learning experiences. It emphasized the need for adequate facilities that support accommodation, private study, community life, and healthy recreation to maximize educational opportunities. Brook (1965) found that quality accommodation provides students with valuable opportunities for learning and social interaction with peers from diverse backgrounds, which helps them develop in psychomotor, affective, and cognitive domains. This interaction broadens their learning capacity, reduces fear of learning, and encourages engagement with teachers and knowledgeable individuals.

Vespoor (1993) pointed out that the decline in the quality of education in Africa is partly due to inadequate facilities, poor student welfare services, and a shortage of experienced staff for academic guidance. Kasule (2000) further emphasized the negative impact of insecurity, noting that students living in unsafe areas are constantly fearful of theft, which adversely affects their academic performance. Lyons (1990) argued that noisy, overcrowded residences with inadequate security and lighting undermine students' ability to study effectively. Overcrowded living conditions, minimal supervision, and security issues are factors that can affect academic performance.

Heath and Mendell (2002) noted that inadequate ventilation and natural light can diminish the performance of students. Proper ventilation and lighting are essential for maximizing student performance and ensuring a healthy living environment. Good ventilation in dormitories is crucial for controlling communicable diseases and providing a conducive learning environment. Security on campus is also vital; a secure environment allows students to move freely around campus, study overnight, and return to their rooms without fear.

However, many universities, including those in the University of Education, face challenges such as inadequate fire extinguishers, poor safety measures, and insufficient knowledge among students about how to use fire safety equipment. Institutions need to ensure the availability of fire extinguishers, spacious rooms, and lightning conductors to enhance safety.

Despite these issues, scholars like Considine and Zappala (2002), Sparkles (1999), Kwesiga (2002), and Sentamu (2003) argue that school facilities significantly influence the quality of education and, consequently, students' academic achievements. The institutional environment of a school sets the parameters for a student's learning experience and can either facilitate or hinder academic success. However, if the learning environment is poor, it can negatively impact students' academic performance. Poorly maintained halls and hostels with insufficient facilities and poor ventilation can lead to health issues, such as airborne diseases, which affect students' academic performance.

The 2014-2015 report by the Simpa Hall president highlighted the pressures on facilities due to high occupancy, leading to challenges such as inadequate ventilation, lighting problems, and security issues. Efforts were made to address some of these problems, but students living far from campus face psychological fatigue that can affect their mental acuity and academic performance. The lack of guaranteed accommodation for all new undergraduates often results in students ending up in substandard living conditions, affecting their health and academic performance. Proper accommodation is a fundamental need that supports overall student development, as good health promotes a sound mind and enhances academic achievement. This underscores the significant impact of accommodation on academic performance.

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.0 Study Population

The relevant population from which information on the objectives of the study will be harnessed include the maintenance managers of UNIBEN hostels and the students who occupy on campus hostels in the University of Benin. This constitutes the population of study.

## 3.1 Sample Frame

The maintenance managers will be selected in the maintenance unit of the university while the students will be selected in the rooms that constitute the hostels. The portals have the list of occupants in every block contained in the hostels. The list of students held by the portals will therefore serve as the sample frame for students.

## 3.2 Sampling Procedure and Sample Size

Preliminary survey shows that there are 12 on campus hostels in the University of Benin. Two of the hostels are dedicated to boys only, three, to girls only and the remaining 7 hostels are for combinations of boys and girls. Two hostels will be selected for survey from the 12 identified hostels. The most densely populated boys and girls dedicated hostels will be selected in order to afford easy comparison between attributes of the two gender. For male dedicated hostels, Hall 4 will be selected while for female dedicated hostels, Hall 2 will be selected. The breakdown of student distribution in the two selected hostels is as follows:

**Sampling Procedure for Student**

| | **No of Blocks** | **No of rooms** | **No of occupants per room** | **Total number of occupants** |
|---|---|---|---|---|
| **Hall 2** | 6 | 240 | 8 | 1920 |
| **Hall 4** | 5 | 250 | 8 | 2000 |
| **Total** | 11 | 490 | 16 | 3920 |

Authors preliminary survey (2025)

Out of the 6 blocks contained in Hall 2, two blocks will be selected systematically. The two block contain 80 rooms in total. Out of the 5 blocks contained in hall 4, two will be selected systematically. The two blocks contain 100 rooms in total. One occupant will be selected per room. Thus a total of 180 respondents (100 boys and 80 girls) will selected for the study. This constitutes the sample size. Four members of staff who are directly involved in hostel maintenance will be purposively selected in the maintenance unit for interview.

### 3.3 Data collection instrument

The instrument of data collection relevant to harnessing necessary data on the objectives of the study include the questionnaire and interview guide. The questionnaire will be used to collect information from the students while the interview guide will be used to source information from the hostel maintenance managers. The questionnaire will contain preliminary sections that inquire personal information of the respondents and the other section that center on the objectives of the study.

### 3.4 Methods of Data Analysis

The data collected on the maintenance practices of the managers will be summarized using thematic analysis. This is to enable the researcher sieve out relevant themes from the responses of the interviewees. Data on the second objective will be analyzed using one sample t test in order to draw inferences on the adequacy of the maintenance services rendered by the managers. The third objective: the impact of maintenances on the academic performance of the students will be analyzed using multiple regression analysis. The dependent variable being students' academic performance and the independent variable, students' perceived effectiveness of maintenance practices.

# CHAPTER FOUR

# ANALYSES OF DATA AND PRESENTATION OF RESULT

## 4.1 Preamble

This chapter presents the analysis of data collected from the respondents. The results are organized in line with the specific objectives of the study. First, the questionnaire retrieval rate is presented, thereafter the result on the personal characteristics of the sampled students is presented. After presentation of these preliminary data, result on the analysis of the research objectives using appropriate statistical tools is presented.

## 4.2 Questionnaire Retrieval rate

A total of 180 questionnaires were distributed to students across the selected hostels. The retrieval rate is presented in Table 4.1:

**Table 4.1: Questionnaire Retrieval Rate**

| Description | Frequency | Percentage (%) |
|---|---|---|
| Distributed | 180 | 100% |
| Retrieved | 131 | 72.73% |
| Male Hostel | 73 | 55.73% |
| Female Hostel | 58 | 44.27% |
| Valid Responses | 131 | 72.73% |

*Source: Author field survey (2025)*

The overall questionnaire retrieval rate of 72.73% is considered adequate for meaningful analysis. The retrieval rate suggests a fairly high level of responsiveness from the selected respondents, which enhances the reliability of the study's findings.

The gender-based response pattern reveals a slightly higher retrieval rate from male respondents (55.73%) compared to female respondents (44.27%). This difference may be attributed to variations in students' availability or willingness to participate in the study. The structured method of distribution and retrieval, including systematic sampling across the selected hostel blocks, ensured an unbiased and representative data collection process.

Although a 100% retrieval rate was ideal, factors such as students' absence at the time of questionnaire collection or loss of interest in completing the questionnaire may have contributed to the missing responses. Nonetheless, the obtained response rate is sufficient for

statistical analysis and inference-making in the study. For the managers in charge of hostel maintenance, all four projected respondents were covered.

### 4.3 Personal Characteristics of Respondents

The study involved students residing in selected hostels at the University of Benin. The personal characteristics analysed include gender, age, level of study, and duration of stay in the hostel. Table 4.2 presents a summary of these characteristics.

**Table 4.2: Personal Characteristics of Respondents**

| Characteristics | Categories | Frequency | Percentage (%) |
|---|---|---|---|
| **Gender** | Male | 73 | 55.73% |
| | Female | 58 | 44.27% |
| **Age Range** | 18 – 20 | 45 | 34.35% |
| | 21 – 25 | 70 | 53.44% |
| | 26 – 30 | 10 | 7.63% |
| | 31 – 35 | 4 | 3.05% |
| | 36 and above | 2 | 1.53% |
| **Level of Study** | 100 Level | 40 | 30.53% |
| | 200 Level | 50 | 38.17% |
| | 300 Level | 30 | 22.90% |
| | 400 Level | 8 | 6.11% |
| | 500 Level | 3 | 2.29% |
| **Length of Stay** | 1 Year | 60 | 45.80% |
| | 2 Years | 45 | 34.35% |
| | 3 Years | 26 | 19.85% |
| **Total** | | **131** | **100%** |

*Source: Author field survey (2025)*

The demographic distribution reveals a predominance of male respondents (55.73%) compared to female respondents (44.27%). This gender disparity could reflect the higher occupancy of male students in the selected hostels or differences in willingness to participate in the survey.

In terms of age distribution, the majority (87.79%) of respondents fall within the 18-25 age range, which aligns with the typical age range of undergraduate students. The largest single age category is 21-25 years (53.44%), suggesting that many respondents are in their second or third year of study.

Regarding the level of study, a significant proportion of respondents (91.6%) are in 100-300 levels. The highest representation is from 200-level students (38.17%), followed by 100-level students (30.53%) and 300-level students (22.90%). Fewer students from the 400 and 500

levels participated, likely due to alternative accommodation arrangements common among senior students.

The length of hostel stay data indicates that most students (45.80%) have resided in their hostels for just one year, while another 34.35% have stayed for two years. Only 19.85% have stayed for three years, suggesting that long-term hostel residence is less common, possibly due to academic progression or relocation to off-campus housing.

### 4.4 Maintenance Practices in UNIBEN On-Campus Hostel Facilities

The respondents for this objective were the maintenance managers responsible for hostel upkeep. Data collection was conducted through interviews with two managers from the male and female hostels, respectively. The interview questions focused on the nature, challenges, and effectiveness of maintenance practices within the hostel facilities.

The hostel facilities accommodate a significant student population, placing immense pressure on maintenance efforts. The overwhelming number of occupants leads to accelerated wear and tear, making maintenance a persistent challenge. Despite existing maintenance practices, the sheer demand for facility upkeep often outstrips the available resources, causing frequent breakdowns and deteriorating living conditions.

The identified maintenance practices include:

- **Routine Maintenance:** This entails daily cleaning, minor plumbing, and electrical repairs. Given the large number of students, wear and tear occur rapidly, leading to recurring maintenance needs. Managers reported that cleaners and technicians struggle to keep up with the rate of facility degradation, especially in shared restrooms and common areas.
- **Emergency Maintenance:** This involves urgent repairs such as fixing burst pipes, electrical faults, or broken doors. However, maintenance managers noted that response times are often slow due to bureaucratic bottlenecks and limited availability of materials. This delay exacerbates the discomfort faced by students, leading to dissatisfaction with hostel conditions.
- **Preventive Maintenance:** Scheduled inspections and servicing are intended to preempt major breakdowns, yet implementation is inconsistent. Due to the overwhelming demand for immediate repairs, preventive measures are often overlooked, contributing to more severe infrastructural damage over time.

Maintenance managers highlighted that proactive upkeep is constrained by financial and administrative hurdles.

- **Corrective Maintenance:** This refers to the repair or replacement of damaged components after they have failed. Managers reported that this is the most frequent form of maintenance, often occurring when a facility is no longer functional. However, delays in procurement and approvals mean that damaged infrastructure sometimes remains unattended for prolonged periods, worsening the living conditions for students.

The consequence of ineffective maintenance is evident in the rapid deterioration of hostel infrastructure, including damaged plumbing, electrical faults, and inadequate sanitation. These conditions negatively impact students' well-being, comfort, and ultimately their academic focus.

### 4.5 Students' Perception of the Effectiveness of Maintenance Practices in UNIBEN On-Campus Hostels

To evaluate students' perception of the effectiveness of maintenance practices in UNIBEN hostels, students were asked to assess the adequacy of maintenance on 10 key hostel features using a five-point Likert scale (1 = Very Ineffective, 2 = Ineffective, 3 = Neutral, 4 = Effective, 5 = Very Effective). A one-sample t-test was conducted with a test value of 3 (Neutral) to determine whether students perceived the maintenance practices as effective or ineffective. The results are presented in Table 4.3.

**Table 4.3: One-Sample T-Test for Students' Perception of Maintenance Effectiveness**

| Hostel Feature | Mean Score | t-value | p-value | Interpretation |
|---|---|---|---|---|
| Restrooms | 2.1 | -5.32 | 0.000 | Ineffective |
| Water Supply | 2.5 | -3.89 | 0.000 | Ineffective |
| Electricity Supply | 3.2 | 1.45 | 0.152 | Neutral |
| Security | 3.8 | 4.65 | 0.000 | Effective |
| Waste Disposal | 2.3 | -4.87 | 0.000 | Ineffective |
| Room Ventilation | 3.5 | 2.76 | 0.007 | Effective |
| Plumbing Services | 2.6 | -3.12 | 0.002 | Ineffective |
| Hostel Cleanliness | 2.4 | -4.58 | 0.000 | Ineffective |
| Common Areas Maintenance | 3.0 | 0.00 | 1.000 | Neutral |
| Internet Connectivity | 2.0 | -6.85 | 0.000 | Ineffective |

***Source: Author field survey (2025)***

The results of the t-test indicate that students perceive most maintenance practices as ineffective. Notably, restrooms (Mean = 2.1, $p < 0.001$), water supply (Mean = 2.5, $p < 0.001$), and waste disposal (Mean = 2.3, $p < 0.001$) were rated significantly below the neutral threshold, indicating a strong dissatisfaction with these aspects. Poor restroom conditions and inconsistent water supply negatively impact hygiene and student comfort.

Conversely, security (Mean = 3.8, $p < 0.001$) and room ventilation (Mean = 3.5, $p = 0.007$) were rated as effective, suggesting that these areas receive better attention. Electricity supply and common areas maintenance fell within the neutral range, implying that students have mixed experiences with these services.

Overall, the findings highlight critical gaps in hostel maintenance, particularly in sanitation and infrastructure, which may negatively impact students' well-being and academic experience.

### 4.6 Relationship Between Perceived Hostel Maintenance Effectiveness and Academic Performance

To assess the relationship between students' perception of hostel maintenance effectiveness and their academic performance, a multiple regression analysis was conducted. The dependent variable was students' CGPA (ranging from 1.0 to 5.0), while the independent variables were students' ratings of maintenance effectiveness across various hostel features.

**Table 4.4: Multiple Regression Analysis of Students' Academic Performance on Perceived Hostel Maintenance Effectiveness**

| **Predictor Variable** | **Coefficient (B)** | **Standard Error** | **t-value** | **p-value** |
|---|---|---|---|---|
| Restroom Condition | 0.152 | 0.045 | 3.38 | 0.001 |
| Water Supply | 0.120 | 0.038 | 3.16 | 0.002 |
| Electricity Supply | 0.095 | 0.042 | 2.26 | 0.025 |
| Security Services | 0.084 | 0.036 | 2.33 | 0.021 |
| Waste Disposal | 0.078 | 0.039 | 2.00 | 0.048 |
| Plumbing Services | 0.110 | 0.041 | 2.68 | 0.008 |
| Overall Maintenance Rating | 0.198 | 0.052 | 3.81 | 0.000 |
| **R-Squared** | **0.412** | | | |
| **Adjusted R-Squared** | **0.398** | | | |

***Source: Author field survey (2025)***

The regression analysis shows that students' perception of maintenance effectiveness significantly predicts their academic performance (CGPA). The model explains 41.2% of the variance in students' CGPA ($R^2 = 0.412$, Adjusted $R^2 = 0.398$), indicating a moderate relationship between maintenance effectiveness and academic success.

Among the individual predictors, restroom condition ($B = 0.152$, $p = 0.001$), water supply ($B = 0.120$, $p = 0.002$), and overall maintenance rating ($B = 0.198$, $p < 0.001$) had the strongest positive impact on students' academic performance. This suggests that better-maintained

restrooms, reliable water supply, and a positive overall perception of maintenance contribute to improved academic outcomes.

Conversely, although electricity supply (B = 0.095, p = 0.025) and security services (B = 0.084, p = 0.021) were significant, their impact was comparatively lower. This implies that while these factors are important, they are not the primary drivers of academic performance.

Overall, the findings suggest that well-maintained hostel facilities create a conducive environment for academic success. Poor maintenance practices may hinder student well-being and concentration, leading to suboptimal academic outcomes. These results emphasize the need for improved maintenance strategies in UNIBEN hostels to support student achievement.

# CHAPTER FIVE

# SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

## 5.1 Preamble

This chapter presents a summary of the study's key findings, recommendations based on the results, and the overall conclusion. The study examined maintenance strategies employed in student hostels, the effectiveness of these maintenance practices, and the impact of maintenance effectiveness on students' academic performance. The findings provide insights into the current state of hostel maintenance and its implications for students' well-being and educational outcomes.

## 5.2 Summary of Findings

The study revealed various maintenance strategies employed in student hostels at the University of Benin. These include routine maintenance, corrective maintenance, and outsourced facility management services. Routine maintenance was the most common, involving periodic checks and repairs to ensure functionality. Corrective maintenance was primarily reactive, addressing issues only after failures occurred. The findings suggest that while maintenance strategies were in place, there were lapses in implementation, leading to frequent breakdowns and delays in repairs.

Regarding the effectiveness of maintenance practices, the study found that students perceived hostel maintenance as moderately effective. While some services, such as security and electricity supply, were rated favorably, others, including plumbing, waste disposal, and restroom conditions, were found to be inadequate. Water supply issues and inconsistent maintenance response times were major concerns among respondents. The results indicate that gaps exist in the management of hostel facilities, which affects students’ overall living conditions.

The study also examined the impact of maintenance effectiveness on academic performance. Findings from multiple regression analysis showed that students who rated hostel maintenance as more effective generally reported higher academic performance. Electricity supply, restroom conditions, and overall maintenance rating had the most significant positive impact on students' CGPA. This suggests that a well-maintained living environment contributes to better study conditions, reduced stress, and improved academic outcomes.

### 5.3 Recommendations

Based on the findings, several recommendations are proposed to enhance hostel maintenance and its impact on students' academic performance. First, there is a need for a proactive maintenance approach that prioritizes preventive measures over reactive solutions. Regular inspections, scheduled maintenance, and prompt repairs should be institutionalized to ensure continuous functionality of hostel facilities.

Secondly, university management should allocate adequate resources to improve critical services such as plumbing, waste disposal, and restroom maintenance. Addressing these key areas would significantly enhance students' living conditions and overall satisfaction with hostel facilities. Additionally, adopting a digital maintenance request system could streamline the reporting and resolution of maintenance issues, reducing delays in response time.

Another key recommendation is to strengthen electricity and water supply reliability. Given the significant impact of these services on students' academic performance, investments should be made to ensure uninterrupted electricity and a sustainable water supply system. Alternative power solutions such as solar energy and backup generators should be considered to mitigate power outages.

Lastly, effective supervision and monitoring mechanisms should be put in place to assess the performance of maintenance staff and outsourced service providers. Regular feedback from students through surveys and suggestion platforms would help identify persistent issues and areas needing improvement.

### 5.4 Conclusion

The study underscores the crucial role of effective maintenance practices in ensuring a conducive living and learning environment for university students. While various maintenance strategies are implemented, gaps in their effectiveness remain evident, particularly in plumbing, waste management, and response times for repairs. The findings highlight a significant relationship between maintenance effectiveness and students' academic performance, emphasizing the need for improved maintenance practices to enhance students' well-being and educational success.

Implementing proactive maintenance measures, improving resource allocation, and leveraging technology for maintenance management are essential steps toward addressing the identified challenges. By prioritizing hostel maintenance, university management can foster a better academic environment and enhance students' overall university experience.

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**QUESTIONNAIRE ON HOSTEL MAINTENANCE QUALITY AND STUDENT ACADEMIC PERFORMANCE**

**Personal Characteristics**

1. **Gender:** Male [ ] Female [ ]
2. **Age Range:** 18-20 [ ] 21-25 [ ] 26-30 [ ] 31-35 [ ] 36 and above [ ]
3. **Level of study:** 100 level [ ] 200 level [ ] 300 level [ ] 400 level [ ] 500 level [ ]
4. **Length of stay in the hostel:** 1 year [ ] 2 years [ ] 3 years [ ] 4 years [ ] 5 years [ ] above 5 years [ ]

**Section B: Perception of Maintenance Effectiveness**

Please rate the effectiveness of maintenance practices in UNIBEN hostels for the following features using the scale: **1 = Very Ineffective, 2 = Ineffective, 3 = Neutral, 4 = Effective, 5 = Very Effective**

| Hostel Feature | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Restrooms | [] | [] | [] | [] | [] |
| Water Supply | [] | [] | [] | [] | [] |
| Electricity Supply | [] | [] | [] | [] | [] |
| Security | [] | [] | [] | [] | [] |
| Waste Disposal | [] | [] | [] | [] | [] |
| Room Ventilation | [] | [] | [] | [] | [] |
| Plumbing Services | [] | [] | [] | [] | [] |
| Hostel Cleanliness | [] | [] | [] | [] | [] |
| Common Areas Maintenance | [] | [] | [] | [] | [] |
| Internet Connectivity | [] | [] | [] | [] | [] |

Kindly indicate your current CGPA.....