

**STUDENT ACCOMMODATION AND ACADEMIC ENGAGEMENT OF
UNDERGRADUATE STUDENTS AT NDEJJE UNIVERSITY, CENTRAL UGANDA**

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**A DISSERTATION SUBMITTED TO THE DIRECTORATE OF RESEARCH AND
GRADUATE TRAINING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF MASTER OF
EDUCATION IN POLICY, PLANNING AND MANAGEMENT OF
KYAMBOGO UNIVERSITY**

OCTOBER 2024

DECLARATION

I **JOHN BIRUNGI**, declare that this dissertation entitled: “**Student accommodation and academic engagement of undergraduate students at Ndejje University, Central Uganda**” is my original work except where cited and has never been submitted to any institution of higher learning for any award.

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APPROVAL

This is to ratify that this dissertation entitled “Student accommodation and academic engagement of undergraduate students at Ndejje University, Central Uganda” has been written under our supervision.

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ACKNOWLEDGEMENT

This dissertation would not have come to pass had it not been for the Almighty God. Everything simply comes from Him. I just want to say “GLORY BE TO GOD!”

In particular, I extend my gratitude to my supervisors; Dr. Ali Baguwemu and Dr. Stephen Ndawula for the unwavering technical and academic support in designing and writing of this dissertation.

I also acknowledge my friends and coursemates who in some way contributed during my time of study. May the Most High God provide you peace and blessings!

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ABSTRACT

The research investigated the relationship between student accommodation and academic engagement of undergraduate students at Ndejje University in Central Uganda. The objectives of the study were to; establish the relationship between the proximity of student accommodation and students' academic engagement, to find out the relationship between the student accommodation facilities and students' academic engagement, and to examine the relationship between the quality of student accommodation utilities and students' academic engagement. The study adopted a cross-sectional survey design. The participants comprised of 120 undergraduate students of Ndejje University which gave a response rate of 60%. The data was collected on the study variables using self-administered questionnaires. Data was analyzed using quantitative methods using relative frequencies and descriptive statistics especially by means. Pearson linear correlation coefficient was used to relate elements of student accommodation and academic engagement of undergraduate students. Regression analysis was used to establish the relationship of each element under student accommodation namely; proximity of student accommodation, student accommodation facilities and the quality of student accommodation utilities with student academic engagement. The findings revealed that the three student accommodation aspects namely; proximity of student accommodation, student accommodation facilities and quality of student accommodation utilities had a positive significant relationship with student academic engagement. This meant that all the three null hypotheses were rejected. Based on these findings, the study therefore established that students residing near the university can attend lectures punctually and consistently due to reduced travel stress, enhancing punctuality, preparedness, and social integration, while also benefiting from easy access to recreational facilities. Student residences' aesthetic quality enhances their perception of their living environment, boosting motivation and engagement, and promotes a balanced, productive study environment. While reliable safe water supply improves cleanliness, reduces instances waterborne diseases, and fosters a healthy living environment for undergraduate students, enabling them to concentrate on their studies. The study recommends that University administrators and private entrepreneurs should collaborate and provide affordable, modern accommodation to ensure student academic engagement and The Ministry of Education and Sports and the National Council for Higher Education should establish and enforce minimum standards for university accommodation in Uganda.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents the historical, theoretical, contextual and conceptual backgrounds to the study. It also gives the research problem, objectives of the study, research hypotheses and the scope of the study. The significance of the study and the conceptual framework are also presented.

1.1 Background of the Study

The background to the study comprises of historical, theoretical, conceptual and contextual contexts.

1.1.1 Historical background

Academic engagement refers to positive participation demonstrated by discernible effort, attention and persistence when learning activities are initiated and carried out (Opdenakker, 2021). It mirrors the quality of students' involvement in, dedication to and acknowledgment of schools and associated initiatives to enhance students' performance by fostering the academic competences necessary for successful study like asking questions, collaborating and managing workload (Alrashidi et al., 2016). According to Bond and Bedenlier (2019), when academic engagement is effectively designed, it boosts student pleasure, motivates them to study, minimizes feelings of isolation and improves their performance

Academic engagement traced from the education system of ancient Greece varied significantly between the city states. Athens placed more emphasis on teaching rhetoric, music and physical education to foster intellectual growth and civic responsibility, while Sparta prioritized military combat training and discipline for young boys (Freeman, 2020).

Through his philosophy of eudaimonia, Socrates developed the dialogical approach known as the Socratic Method which involved asking questions to elicit critical thinking and shed light on concepts. The aim was to foster in citizens the ability to reason, make moral decisions and engage in introspection to learn more about themselves (Kucukaydin & Cranton, 2020). Plato established the Academy, with a focus on intellectual discussions (Smith, 2021), while Aristotle founded the Lyceum, where students studied a wide range of subjects, including politics, ethics, and biology (Bishop, 2018). The conviction in the holistic development of the “kalos k’agathos,” or “wise and good” man, was the most prominent philosophical doctrine. It placed a strong emphasis on the value of developing the mind and body in order to produce informed, moral and active citizens (Howitt- Marshall, 2023). Academic engagement thus emphasized oral tradition, dialogues, debates, critical thinking, logical reasoning, memorization and rhetoric to promote accurate transmission of knowledge and wisdom to future generations (Classical Faith Education, 2023).

In the middle Ages, the Church held greater authority over education. Monastic schools served as hubs of learning, educating both clergy and a select group of students. Students were instructed in trivium subjects-grammar, rhetoric, and logic as well as quadrivium subjects-arithmetic, geometry, music, and astronomy (Johnson, 2023). However, the establishment of the University of Bologna and the University of Paris in the 12th century brought about the development of scholasticism, which stressed rigorous dialectical thinking and harmonized faith with reason (Ruokanen, 2021).

During the renaissance period, humanism transformed education by bringing back the traditional educational resources and emphasizing “stadia humanitatis” and individualized instruction based on each student’s needs and skills (Wen-juan, 2018). However, during the industrial revolution, the industrial model of rote learning and discipline was prioritized in

student engagement techniques to get students ready for factory employment (Brown, 2023; Thompson, 2024).

In the early 20th century, John Dewey promoted a fresh approach to education that placed emphasis on experience, critical thinking, and developing students' problem-solving abilities (Harris, 2022). The late 20th and early 21st centuries saw a significant shift in educational engagement procedures due to technological innovations. Online learning is now possible thanks to the internet and digital tools, which make learning and interaction more flexible, accessible and virtual (Johnson, 2022; Smith, 2023). Undergraduate students now have more options for engaging in their academic work and receiving individualized instruction due to the incorporation of technology such as virtual classrooms, educational software and artificial intelligence (Williams, 2024). According to Bond et al. (2020), digital technology has become a major part of higher education, inherently affecting all areas of the student experience. Thus student academic engagement is a key aspect in university education relevant for academic research.

1.1.2 Theoretical Perspective

The underpinning theory for this study was the Self Determination Theory (SDT) by Ryan and Deci. According to the SDT, which has its roots in human motivation processes, individuals can achieve self-determination after their three fundamental needs of autonomy, competence and relatedness are met. It assumes that the social context has the power to either satisfy or hinder the fulfillment of these needs (Reeve, 2024). SDT as an influential theory on human motivation and well-being emphasizes both autonomous and managed motivation in different forms to forecast outcomes like as performance, engagement, energy and psychological wellness (Ryan & Deci 2017; Ryan & Deci 2024).

Since SDT suggests that settings that meet students' basic psychological requirements result in increased well-being, this idea is crucial to understanding student accommodation and academic engagement. This is so because students who are confident in themselves are more likely to participate in active learning thus there is a strong correlation between engagement and well-being (Williams & Johnson, 2022; Brown & Thompson, 2024). Fostering intrinsic motivation and meeting fundamental psychological needs can result in increased academic engagement and higher academic achievements. According to Wang et al. (2017) Student autonomy, competence, and relatedness are supported in social circumstances which foster intrinsic drive.

The study using the self-determination theory gave attention to how university accommodation meeting students' psychological needs of competence, autonomy and relatedness influences their academic engagement.

1.1.3 Conceptual Perspective

Academic engagement is an interdisciplinary concept that highlights different motivational, cognitive and behavioral characteristics in students. While definitions vary amongst researchers, common themes focused on are student involvement, students' psychological involvement in learning, their affiliation with school and school-related activities, and their motivating mindset characterized by zeal, devotion, and absorption (Yukhymenko-Lescroart, 2022). Alrashidi et al. (2016) assert that the engagement is characterized by how students interact, invest, commit, and identify with school and school-related activities in order to enhance their academic achievement.

Various researchers from the students' perspective have described student academic engagement as a set of behaviours that show the involvement of a student in the university community and lead to high-quality learning (De Villiers & Werner, 2016), as the time and

effort students invest in their learning community (Bond & Bedenlier, 2019), as the amount of physical energy invested in the academic experience by a student (Holmes, 2018) and as a student's long-term commitment to any part of learning, schools, or education (Alba & Fraumeni, 2019). It also describes the quality time plus endeavour students dedicate to the activities that systematically connect to the university's desired results and what institutions undertake to guarantee student engagement (Groccia, 2018), as well as active student participation throughout the learning process (Heilporn et al., 2021).

Students' academic engagement is a complex entity with four dimensions: behavioral, emotional, cognitive and agentic engagement (Montenegro, 2017). Nguyen et al. (2018) note that, these aspects emphasize the complexities of student participation and urge specificity in the tools and assessments used to research it. Behavioral engagement describes a student's behavior in class. It also refers to students' active, goal-oriented, adaptable, constructive, and persistent engagement within the academic context (González & Paoloni, 2015).

Affective engagement refers to student sentiments and attachments to the institution, education, instructors, classmates, along with their positive and negative reactions, sentiments, and the relationships they have at school (Havic and Westergard, 2019). It also describes the student's level of a desire to learn, which leads to increased motivation and enjoyment, as well as a level of commitment (Groccia, 2018). Studies about the experiences of students show that while entering a university, students must experience a strong need to quickly create their sense of self, identity and belonging to establish productive working connections with academic and professional personnel (Meehan and Howells 2019).

Cognitive engagement refers to students' inner psychological attributes or non-visible features that enhance endeavor in learning, comprehending and mastering the facts or abilities that are emphasized in their academics like; attention, information acquisition, processing, storage and retrieval from memory (Nguyen et al, 2018). It also emphasizes how

important it is for students to practice self-regulated learning, apply metacognitive strategies, and persevere in their studies (Ben-Eliyahu et al, 2018) and how much a person contemplates the educational activity or how much one is paying attention to and focused on the task (Mugizi et al., 2020).

Agentic engagement refers to students' active participation in their own learning process as well as the reciprocal and transactional process that they go through with teachers and classmates (Mugizi et al, 2020), or the learner initiated proactive contributions (Montenegro, 2017). The engagement of students does not happen in a vacuum; rather, it happens as a result of a variety of contextual circumstances, and it is critical to include these broader impacts while investigating students' engagement (Kahu, 2018).

Looking at accommodation, Adu et al. (2014) define university residence as a temporary accommodation provided during the process of obtaining a university degree, as well as other amenities enjoyed during that time. Or it is the provision of housing facilitates to students to meet their housing needs to pursue academic, practical and social goals throughout their academic careers (Hassanain et al., 2018). Owolabi (2015) describes residences for students who live on or off campus as student housing. Those who live on campus are referred to as on-campus students, and those who do not are referred to as off-campus students. Accommodation in this study was operationally defined as designated residential facilities or housing options provided by the university or private housing entrepreneurs for enrolled students at the University. The accommodations aim to provide a secure and inclusive living environment that fosters the academic and personal growth of students.

In this study, student accommodation was viewed in terms of, proximity of student accommodation (on campus, the campus suburb and far from campus), student accommodation facilities (living and study spaces, common rooms games and sports

facilities, compound) and the quality of student accommodation utilities (safe water supply, electricity supply, health and sanitation). The study examined students' academic engagement across four dimensions: behavioral, affective, cognitive, and agentic engagement.

1.1.4 Contextual Perspective

Academic engagement comprises all those factors that meaningfully influence all the learning practices of students. These include the lecturers' skill and knowledge, the caliber of lectures, the way courses are structured, the academic material covered, language of instruction and professional readiness (Ammigan & Jones, 2018; Marijanovic et al., 2021). Undergraduate students may exhibit increased academic engagement due to a greater sense of belonging at university. The most important factor in their academic involvement seems to be their drive to succeed and be the best in their line of work, which is coupled with clarity about their career ambitions (Yukhymenko-Lescroart, 2022)

A student-friendly environment is crucial for academic success as it provides formal structures that encourage students to engage academically (Mbandlwa, 2021). According to Morris et al (2016), a residence with dependable security, well-organized administration and adequate amenities help students engage academically. Student engagement maybe influenced by social and academic programs that take place in their residential halls. Peer support and higher-level support can foster independence and responsibility among students in residences. Diversity is a valuable experience for students as it allows them to adapt and thrive in varied environments (Republica, 2020).

Accommodation in tertiary institutions attracts a diverse range of students from various nationalities and backgrounds to higher education. However, some students are forced to find accommodations outside of their school due to a scarcity of housing options on campus. The limited access to amenities such as proximity to classrooms, libraries, campus-

wide internet connection, fast laundry services, social interaction, improved networking opportunities, and involvement in university events is a significant disadvantage they face (Mbandlwa, 2021). As a result, student housing needs to be utilized as a strategy to increase students' academic engagement since a student's place of residence may have a significant impact on their level of academic engagement.

Creating a designated on-campus space for students to gather, socialize and study could begin to address the sense of belonging needed by these students (Courtney, 2018). Policy decisions must be made to ensure that institutions provide students with adequate housing to ensure they produce eligible graduates (Kim & Lee, 2016). But with the exponential growth in student enrollment, growing managerialization and the rise of academic capitalism, accommodation is becoming less and less of a primary obligation for universities (Jessop, 2017).

In order to clearly understand this, the researcher was motivated to conduct this study to find out the relationship between accommodation and academic engagement of undergraduate students at Ndejje University in central Uganda.

1.2 Problem statement

Academic engagement among students is influenced by various factors including individual traits, lecturer style, teaching style, peer dynamics, and other learning environment elements. Emotional, social, task-related, cognitive, metacognitive, emotional, and communicative factors can all have an impact on academic engagement (Amerstorfer & von Münster-Kistner, 2021). Since student academic involvement offers insight into university procedures and instruction, it is essential to comprehend student conduct in academic settings. This supports educators in creating pedagogical strategies that optimize student learning opportunities (Armando, 2019).

With learning spaces adopting all the traits of an active learning environment, which are defined by the ability to create and make things, learning should be flexible, collaborative, team-based and project-based. Project teams should be equipped with a diverse array of technologies and be able to function as both interdisciplinary and transdisciplinary teams. Digital technologies such as high-speed internet networks, video-based collaboration, high-resolution visualization, and 3-D printing should be utilized to enhance student engagement in the learning environment (Valenti, 2015). Universities are striving to adopt classroom layouts that stimulate creativity, cooperation and flexibility because even small changes can have a good impact. Classrooms are now viewed as the “third teacher,” after parents and instructors (Google for Education, “Future of the Classroom,” Google, 2019).

The University’s primary goal is to offer high-quality education to its students (Birchard, 2018). However due to the exponential growth in student enrollment, growing managerialization and the rise of academic capitalism, accommodation is becoming less and less of a primary obligation for universities (Jessop, 2017). With the student now being viewed as an autonomous unit, there has been a significant change from the collegiate learning environment which may have a detrimental effect on academic engagement. Yet accommodation in halls or hostels can boost undergraduate students’ reading aspirations, reduce distractions, and encourage participation in sports, games, clubs, and social activities, improving academic engagement.

The relationship between accommodation and academic engagement of undergraduate students in a university is crucial for their success and overall campus experience. Thus academic engagement of undergraduate students in meaningful learning needs attention. It is on the background of the above that the researcher got the motivation to undertake this study to find out the relationship between accommodation and academic engagement of undergraduate students at Ndejje University, Central Uganda.

1.3 Purpose of the study

The purpose of the study was to investigate the relationship between accommodation and academic engagement of undergraduate students at Ndejje University in central Uganda.

1.4 Objectives of the study

The study intends:

1. To establish the relationship between the proximity of student accommodation and students' academic engagement.
2. To find out the relationship between the student accommodation facilities and students' academic engagement.
3. To examine the relationship between the quality of student accommodation utilities and students' academic engagement.

1.5 Research hypothesis

The study tested the following hypotheses;

1. There is no significant relationship between the proximity of student accommodation and students' academic engagement.
2. There is no significant relationship between the student accommodation facilities and students' academic engagement.
3. There is no significant relationship between the quality of student accommodation utilities and students' academic engagement.

1.6 Scope of the study

1.6.1 Content scope

In general, the Study examined the relationship student accommodation has on students' academic engagement at Ndejje University in Central Uganda. Particularly, the research

established the relationship between the proximity of student accommodation and students' academic engagement, found out the relationship between the student accommodation facilities and students' academic engagement and established the relationship between the quality of student accommodation utilities and students' academic engagement.

1.6.2 Geographical scope

This study was done at Ndejje University. The campus is situated in a rural area at Ndejje Hill, 14 kilometers (9 miles), in the north-west of Bombo Town, Luweero District in the central region of Uganda. The study was conducted at Ndejje University on its main campus.

The choice was taken due to the fact that, Ndejje University is a prime location with a diverse and dynamic environment that is reflective of the broader context of higher education institutions in Uganda. When compared to other universities in Uganda, Ndejje University provides a well-rounded atmosphere with well-developed yet still-evolving residential and academic facilities. This made it possible to study the relationship between a range of accommodation types and academic engagement of undergraduate students in a University setting that is neither too old nor too new. Also, many undergraduate students at Ndejje University reside both on and off campus which made the university a rich source of data for analyzing various accommodation arrangements with student academic engagement.

1.6.3 Time scope

The research was carried out over a one-year period. This provided an optimal balance between breadth and depth for this research. The time scope followed Ndejje University's academic calendar. Thus data collection aligned with key academic study time that minimized disruptions that could be caused by examinations period and holidays.

Conducting this research over a one- year period was feasible given the resources and time the researcher had for this study. This duration was adequate for the researcher to gather enough related literature on student accommodation and students' engagement, gave room for the collection of sufficient data, analysis and presentation and writing a final report that was submitted to the department. Thus it provided enough time for data gathering, analysis and validation, which ensured robust and reliable results.

1.7 Significance of the study

This study intends to fill a vital knowledge vacuum regarding the contributions of several features of student housing, such as proximity, facilities, and utilities, to academic engagement, especially in the setting of higher education institutions in Uganda. The following are the projected areas of significance for this study:

The findings may be quite helpful in helping the universities distinguish which aspects of student accommodation require modification. This can improve the general comfort, well-being and mental health of students, making student's time at university more engaging and enjoyable. The quality of student accommodation plays a central role in shaping academic engagement and performance. Thus insights from the study could help Universities create specialized support services such health and counseling programs that deal with particular issues students encounter in their living situations for better wellbeing and academic engagement.

The findings of this research may lead to increased academic accomplishment through the optimization of learning environments at universities. Using the data on how different types of accommodations impact academic engagement, the university or universities can make well-informed decisions to maximize living conditions that support better study habits and academic engagement. By focusing resources on housing options that best encourage

academic engagement, institutions may maximize the return on their student housing spending options.

The study's empirical data can be used to create and improve regulations pertaining to academic support and housing for students. This may help to ensure that decisions are based on solid evidence rather than assumptions. The results of the study can help universities in Uganda prepare for the future by assisting in the alignment of accommodation policies with institutional and academic goals.

The results could lead to a better perception of the connection between academic engagement and accommodation which could aid in addressing variables that raise the risk of student dropout. Inadequate facilities and poor living conditions can detract from students' focus and involvement in academic activities, leading to lower engagement levels. Universities and accommodation providers can utilize these findings to prioritize improvements in student housing facilities, focusing particularly on enhancing utilities such as water, electricity, and internet. By doing so, they can foster a more conducive academic environment, which could potentially enhance academic engagement. The provision of superior accommodation options can significantly enhance student satisfaction and retention. This may help universities to prepare for undergraduate students' viable accommodation options to ensure timely course completion thus boosting graduation rates and overall institutional success.

This study contributes to the understanding of the relationship between accommodation and academic engagement among undergraduate students in Ugandan higher education, a subject with limited research. In addition, results can guide future research on the influence of accommodation features on academic outcomes and for comparative studies across various universities and regions.

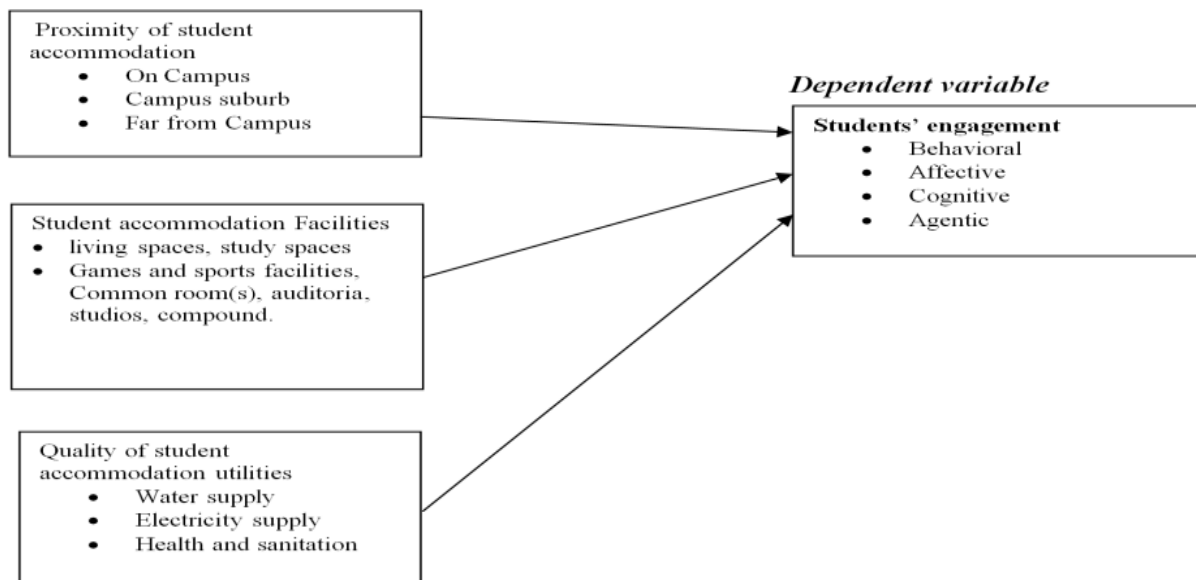
1.8 Conceptual framework

According to the conceptual framework (Figure 1.1), it suggests a possible connection between student accommodation and academic engagement of undergraduate students at Ndejje University as indicated below.

Figure 1.1: Conceptual Framework Relating student accommodation and students' engagement

Independent variable

Student accommodation



Adapted from Nelson and Kahu (2018)

The conceptual framework suggests a possible connection between accommodation and academic engagement among undergraduate students at Ndejje University, adapted and modified from Kahu and Nelson (2018). The researcher assumed that decent and comfortable accommodation is characterized by high security to guarantee the safety of students, good health and sanitation. Proximity to the institution of learning may minimize the time wasted by students on long travel. Accommodation facilities with decent living spaces, study/reading spaces, common rooms, good safety and security procedures, as well as co-curricular

infrastructure, such as ball game fields, athletics fields and indoor game facilities may help improve on the students' physical fitness and wellbeing. Furthermore, the researcher assumed that proximal student accommodation may aid in the modification of academic engagement of undergraduates by increasing student participation, reducing lateness, facilitating timely completion of assigned tasks and increasing student interest in tasks during teaching and learning.

Besides that, the researcher had an assumption that appropriate student accommodation equipped with adequate recreational facilities may contribute to academic engagement of undergraduate students by providing a conducive environment for self-exploration and research, reflection on their learning practices and above all may develop the ability of the students to question their own thinking. The researcher further assumed that, suitable student housing may foster agentic student involvement by making students proactive or initiators of their own learning, raising their self-efficacy and so may improve the lecturer-student relationship since a bad experience in accommodation may impact negatively on a student's academics (Global Student Living, 2019).

These assumptions are based on the Self Determination Theory (SDT) by Ryan and Deci that suggests that people can become self-determined when the three basic personal needs of autonomy, competence and relatedness are satisfied (Ryan & Deci 2017). It assumes that the social context has the power to either satisfy or hinder the fulfillment of these needs and in this case the social context is accommodation. The role of environments in satisfying students' basic psychological needs may lead to greater well-being. Enhancing student autonomy and promoting cooperative reflection and educational autonomy can enhance academic motivation and engagement (Brown et al., 2015).

It also assumed that psychological needs of competence, autonomy, and relatedness can be addressed through engaging and challenging lessons that are relevant to students' lives

and decision-making processes. The support networks available to students in their residences are designed to help them overcome obstacles and develop a greater passion for learning.

Therefore, undergraduate students' academic engagement is crucial, requiring effective support in behavioral, emotional, cognitive, and agentic dimensions within a university environment that respects their psychological needs.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The relevant literature for the study is presented in this chapter. It includes a theoretical review, a study of literature on specific objectives and a literature gap analysis.

2.1 Theoretical Review

Self Determination Theory (SDT) by Ryan and Deci

The study's underpinning theory was the Self Determination Theory (SDT) by Ryan and Deci (2018) which asserts that meeting fundamental psychological needs is crucial for psychological growth and well-being.

The Self-Determination Theory (SDT), rooted in human motivation, suggests that individuals can attain self-determination by meeting their three fundamental needs of autonomy, competence, and relatedness. Its underlying premise is that social context has the power to either satisfy or frustrate these needs (Reeve, 2024). SDT emphasizes both autonomous and managed motivation to forecast outcomes such as vitality, performance, engagement and mental well-being. By separating autonomous from controlled motivations, it offers a framework for understanding personality and social behavior (Ryan & Deci 2017; Ryan & Deci 2024).

As it suggests that settings that meet students' basic psychological needs result in increased well-being, this theory is crucial to comprehending accommodation and academic engagement of undergraduate students. Students who feel confident in themselves are more likely to actively engage in the learning process, which is why well-being and engagement are strongly related (Williams & Johnson, 2022; Brown & Thompson, 2024). SDT helps explain why fostering intrinsic motivation and satisfying basic psychological needs can lead

to improved academic engagement for better academic outcomes. Wang et al. (2017), social environments that foster students' competence, relatedness and autonomy encourage intrinsic drive.

Within the various forms of accommodation, social influences have the potential to positively or negatively impact an individual's intrinsic desire to learn (Koludrović & Ercegovac, 2015). Therefore, granting students more autonomy and focusing their energies on educational autonomy and joint reflection increases their motivation for learning, which in turn promotes their degree of academic engagement (Brown et al., 2015). Students' engagement in the learning process is strong and self-sustaining when they are driven by genuine curiosity and delight. Lecturers can boost students' academic engagement by implementing autonomy-supportive teaching strategies, offering choices and promoting self-initiation within University accommodation types that meet students' psychological needs (Wang et. al., 2019).

Thus the relationship between accommodation and academic engagement of undergraduate students at Ndejje University was studied using the SDT as the underpinning theory.

2.2 Review of related literature

This section provides a comprehensive review of the literature related to the study's specific objectives.

2.2.1 The proximity of student accommodation and academic engagement of

Undergraduate students

As an ecological environment for learning activities, student accommodation integrates psychological and social aspects to suit needs, objectives and expectations of the students. Comfort, convenience, and safety to students significantly enhance the development of a

positive learning environment, thereby helps students to achieve their educational objectives (Ghani & Noralfishah, 2016). Accommodation plays a crucial role in students' academic experiences, reflected in various key ways. Most students use their room as their primary study space, while 10% utilize communal areas within their accommodation (Emms, 2021). The demand for student accommodation is influenced by trends in higher education enrollment, population growth, affordability and government funding rates (International Finance Corporation, 2020).

According to Fassett et al. (2021) acceptance to a college or university is a thrilling, nerve-wracking and perplexing experience for prospective students, as it begs the question of where they will reside, what is it like to live on a college campus? With whom would you share a room? Xulu-Gama (2019) contends that universities have an obligation to provide their students with a sustainable living and learning environment and that student housing should be used as a tool to help students achieve academically. Whereas finding accommodation can be positive, unsatisfactory experiences can negatively impact academic engagement. Accommodation is crucial for students when deciding where to study. Students' academic engagement will suffer from a poor accommodation experience. Engaging with students as early as possible in the process, particularly first years, can be of huge benefit. It is crucial to identify these students as soon as possible and give them the support they need to adjust to their new housing in order to give them the best chance to succeed in their course (Global Student Living, 2019). Therefore, it appears that student accommodation has a key role in the in the general success of institutions and cannot be disregarded as an important factor in the academic engagement of students.

In a study by Zotorvie (2017) students' desire for residential accommodation is a product of aspects such as closeness to lecture rooms, large and well aerated rooms, tranquil and pleasant surroundings, the study area, accommodation charge, the availability of power

and water. According to Mugambwa et al. (2016) kitchens, personal baths, study nooks and gathering areas are regarded essential amenities in student accommodation and they must be well-developed and managed with the purpose of fostering students' academic engagement. Simpson and Burnett (2019) in their study in South-Eastern Virginia examined the influence of residence hall types on general students' academic performance and discovered that tutoring services significantly enhanced academic values. The counseling programs that exist in various halls on or off campus provide a positive effect on students' academic performance if effectively administered.

In line with the above, students generally feel more secure on campus than off campus. This is a result of the fact that educational institutions keep guards on campus and keep an eye on what students are up to. Private conversations in hostel rooms have the potential to develop into beneficial partnerships that last a lifetime and benefit both parties (Auwal, 2022). In order to prevent micro disappointments from building up, institutions work to improve the system such that the aspects of college that are most difficult are those that are important and relevant to learning (Alexa, 2018). Whether they are from outside or domestically, students living off campus place a higher premium on safety and security. International students living off campus are also more concerned with the physical features of their housing, including its aesthetic appeal, quality and condition. They are also more inclined to prioritize their personal space when living off campus (Jones & Smith, 2020). Compared to international students, domestic students place a higher value on convenience and location-based factors such amenities and commute time to school.

Graham et al. (2018) state that students residing on campus engage a little bit more in interactive diversity and are perhaps more engaged in group learning activities. This is preferable to traveling from a distance in fields involving social integration. However, some of the negative effects may be lessened by students living close to campus. Etikan et al.

(2017) argue that students staying on campus have more frequent interactions and connections with the institution's local community, which improves their chances of having better learning engagements.

However, van Zyl and Fourie-Malherbe (2021) posit that off campus residence allow commuter students to not only focus on their studies, but also to meet other students in co-curricular spaces and learning communities who are not part of their immediate surroundings in classes and residences, as well as to form unlikely friendships and have conversations that engage them more. According to Mbandlwa (2021), another benefit for students living in university-provided housing is that they have access to sufficient amenities for productive study sessions. University-provided housing for students is favorable to learning and gives them access to all they need to participate in academic activities.

Additionally, distractions which can negatively impact academic engagement, such as excessive noise, unreliable power sources, intrusions and rumors that are co-located are commonplace for off-campus students. Conversely, students enrolled on campus can face fewer, greater or completely different challenges that could also affect their level of academic engagement (Kim and Lee, 2016). However, the sensation of freedom and engagement that other students have is not shared by students who live at home. This is so because they fall behind in many academic tasks, which make them feel as though they are not university students. The lack of transportation prevents students who are staying at home from staying on campus till late. Staying at home prevents students from participating in academic activities such as group assignments and cross-nights (Mason, 2020).

Furthermore, it is critical to recognize that students' interpersonal interactions with new communities suffer as a result of their slow adaption to their new social context, both in university and in their neighborhood, restricting their academic engagement. This is in agreement with Fakere (2017) and Mohit et al. (2017) view that, neighborhood amenities

such as central facilities, supporting facilities and educational facilities have a strong association with student academic engagement and satisfaction. As a result, students who are content with their halls of residence are less likely to suffer from despair and mobility issues, which can have a negative impact on their academic engagement (Mohit & Elsayahli, 2017).

Chiguvu (2018) shows that insufficient room and a lack of collaboration between public and private institutions breeds student accommodation challenges and encourages truancy and poor attention to academic studies for economically challenged undergraduates. Paloş et al., (2019) note that academic engagement may be impacted by student burnout, a state that is highly reliant on stress. The inclusion of these variables is crucial in understanding the factors that influence and are influenced by academic engagement (Maslach & Leiter, 2016). According to the International Finance Corporation (2020), the South African government is enhancing student housing through regulatory frameworks, funding and the Student Housing Infrastructure Program to foster academic engagement for all.

From the review of literature above, it is clear that the relationship between proximity of accommodation and academic engagement of undergraduate students has not been adequately researched particularly in Ugandan universities. Due to this gap, it was important that this study using Ndejje University in central Uganda, tests the relationship between proximity of student accommodation and academic engagement of undergraduate students.

2.2.2 Student accommodation facilities and academic engagement of undergraduate

Students

Student academic engagement is ultimately impacted by the accommodation atmosphere, which is influenced by how well-maintained the facilities are perceived by the students (Bowers & Urick., 2016; Maxwell. 2016). Hazards to residential safety include earthquakes,

exposed electrical wires, shattered window glass and contaminated restrooms. These hazards can come from both within and outside the school and may negatively affect academic engagement. Thus sustaining a secure and hygienic accommodation facility is essential for the security of students (Barret et al., 2019).

When new students arrive to study at a university, they want to feel safe and comfortable. Well-designed housing may help them establish a positive environment and a new feeling of home, which will support their academic engagement. Overpriced, insufficient, overly crowded or too isolated housing is a major additional strain that can negatively affect a student's chances of academic engagement and well-being in general (Jackson et al., 2019). A mutually beneficial interaction between students and their accommodation facilities is the foundation of their academic engagement. Engaging facilities promote students' enjoyment, concentration, curiosity, internal motivation and sense of self-worth (Shernoff et al., 2016). The physical experience of students in these facilities represents their engagement and connection to the school's external environment (Olson & Peterson, 2015). Pérez-Salas et al. (2021) posit that individual and contextual factors enhance students' academic engagement by assisting the individual in meeting three important needs: relatedness, autonomy, and competence.

According to Morris et al (2016) decent accommodation facility should have dependable security, well-organized administration and adequate amenities to let students contribute to their academic involvement. The academic and social programs held in the resident halls for students help them succeed. Academic engagement is influenced by students and instructors interacting often. Students' residences provide peer support and higher-level support, teaching independence and responsibility. These foster engagement of students with diverse individuals, enabling students to live harmoniously with different cultures, which is beneficial for their learning experiences (Republica, 2020).

In addition, the school's built facilities and surrounding neighborhoods can offer opportunities for students to engage in activities that promote pro-social conduct and social emotional engagement (Villanueva et al., 2016). In a bid to encourage pro-social conduct, foster social-emotional learning and produce more motivated and engaged students, the student-teacher interaction is essential (Federici & Skaalvik, 2014). If students feel inspired, have a sense of belonging, and have the chance to participate in activities, they can have higher well-being as well as improved completion and academic outcomes (Anna et al., 2017). Interpersonal relationships, temporal and spatial dimensions, and social and emotional competencies all influence motivation, pro-social conduct, and academic engagement (Adridge et al., 2016). Facilities utilized both within and outside of school hours enable positive interactions, better physical and mental health, and easier access to student services (Prati & Cicognani, 2018; Prati & Cicognani 2021).

Notwithstanding, undergraduate students face several obstacles to academic involvement, such as inadequate ICT basic skills, a shortage of reliable and cheap housing and peer pressure. Therefore, accommodation facilities must lower obstacles to student's participation to encourage consistent attendance, encourage involvement through inclusive education, foster a feeling of community where everyone is respected and help students develop the resilience they need to advance (Brown & Taylor, 2021). Higher levels of self-efficacy enable students to adjust to their ever-changing learning environment with more ease. For instance, switching to online instruction allowed for more flexibility, which was acknowledged as a benefit of learning during the pandemic (Rajab et al., 2020). Students who indicated a stronger sense of self-efficacy and who identified as intrinsically motivated stated the greatest advantages of online learning. However, students with low self-efficacy would lack confidence in their ability to learn independently (Hews et al., 2022).

Thus caring educators can communicate with students outside of the classroom by using websites, social media applications, email and online learning platforms. Having cameras turned on during virtual class sessions fosters a feeling of social and physical proximity (Christopher et al., 2020). If students receive regular, constructive feedback that helps them reach their learning objectives and gives them actionable and understandable information about their efforts, it can boost their academic engagement (Mercer & Dörnyei, 2020) Outdoor green spaces significantly improve health and academic engagement when they are used in a motivating and appropriate way (Scott-Webber et al., 2017) as being in nature can have a great effect on student engagement. According to a review, nature-based learning improved grades, decreased dropout rates and decreased disruptive events while also increasing interest among disinterested students (Kuo, Barnes & Jordan, 2019).

Furthermore, Internet access is essential for fulfilling the vision of the future, as it improves educational quality by providing access to a plethora of resources containing information, knowledge and instructional matter as well as well as providing possibilities for learning both in and out of the classroom (Internet Society, 2017). According to Bolliger and Martin (2021), students need to actively participate in the online environment in order to accomplish the learning objectives of an online engagement and participate in self-directed learning with classmates, the instructor and the multimodal online instructional content. Consequently Castañeda and Selwyn (2018) note that there has been a push for a deeper comprehension of how online learning influences students' academic engagement in order to improve teaching methods and student academic engagement. However, power outages, slow internet speeds, inadequate computer terminals, too many hits or information overload and insufficient equipment are only a few of the problems that limit effective internet access and utilization by the undergraduate students (Apuke & Iyendo, 2018). Broadband infrastructure is required to remedy this if lecturers and students are to take full advantage of what the

internet has to offer since everyone at whatever stage of life, one can benefit from the Internet's educational resources (Internet Society, 2017).

Additionally, emotional components of self-efficacy and belonging are crucial for students' academic engagement. Stressors associated to the pandemic, or a life load, such as demands on student's time, money, families, social lives and health, cause anxiety-inducing feelings and have a detrimental effect on students' academic engagement (Hews et al., 2022; Rodrigo et al., 2022). Students' mental health is negatively impacted by the combination of these life load pressures and emotions like a sense of belonging, which results in a learning load that resembles a life load and negatively affects academic engagement (Kahu and Nelson, 2018).

So, Hari Rajan et al. (2024) advise that it is the duty of educators to develop future learning models that can adjust to students' shifting goals and motivations in order to improve academic engagement. To create a positive learning environment, it is important to consider factors like workload, well-being, and access to equipment, collaborative tools, and instruction to enhance students' technological proficiency. Although they can boost student performance and reduce sedentary behavior, flexible learning spaces can sometimes pose pedagogical difficulties (Kariippanon et al., 2018). Nevertheless, the mere presence of dynamic learning facilities does not ensure student involvement, achievement or presence (Ashley, Frosten & Klemens, 2020). Therefore, educators must design future learning models and facilities that promote student wellbeing, foster belonging and encourage interaction. This fosters a sense of belonging, support and access to resources for skills development and ultimately, academic engagement.

According to Cao et al. (2019) when educational institutions establish regulations that give structure to well-suited and accommodating community living, it makes students more academically engaged. This is so because they are in an interpersonal context that shows

citizenship that is accountable, feels empathy for others, as well as a learning environment that provides chances for individual growth and development. Nonetheless, Kent et al. (2018) note that students connect with their learning programs in a variety of ways. Lectures, seminars, peer group discussions and ad hoc contacts with teaching staff, as well as other parts of campus life such as sports and student groups, are examples. Students who are engaged anticipate a return on their time and endeavor, which leads to them achieving the objectives of those meaningful activities more successfully. Thus, students' participation is often increased when they feel like they belong at the University. When they do not, behavioral issues are common (Barkley & Major, 2020).

Therefore, a school is a crucial site to learn about techniques to promote student engagement and maximize educational effectiveness of the students (Wawrzynski & Baldwin, 2014). In line with this, Lyimo (2017) says that if schools are to execute a significant part in educating the next generation on how to be successful members of society, every precaution should be made to ensure that the school facilities promote student success rather than failure. Olayinka and Elijah (2019) argue that when schools culture focus on instructional experiences that psychologically promote desirable character traits, they can impact students' behavioral involvement. While according to Awori et al. (2020), students' academic participation necessitates the provision of an atmosphere suitable to their teaching, such as decent libraries, textbook availability, experienced and qualified lecturers, as well as adequate learning infrastructure, such as science laboratories and adequate classrooms. This argument stems from the fact that proper learning settings allow students and lecturers to collaborate in the learning process, which inspires students and encourages them to participate in class tasks (Bdiwi et al., 2019). Thus, the more input from students they have over their learning environment, the more academically engaged they will be and the higher their accomplishment will be (Simpeh & Adisa, 2020).

To this effect, Universities have long pushed to enhance student engagement in campus activities and leadership responsibilities. This requires students to put effort and time into these pursuits and such a perspective necessitates the University's active participation in the design of educationally purposeful events for students to ensure their meaningful participation (Komives, 2019). As a result, Heasley et al. (2015) advise institutions building new facilities to carefully pay attention to the impact of architectural aspects, including a healthy mix of private and public spaces, equity considerations and educational experience optimization.

Looking at the co-curricular side, students' involvement in sports and games enables students to get in shape both physically and psychologically to manage all curricular and extracurricular tasks as well as reducing their involvement in negative behaviors since they positively integrate into various activities (Milambo & Pacho, 2021). Participating in sports and games builds self-assurance, self-control, teamwork and unity, which enhances both intra-personal and interpersonal skills among students. These skills help them to interact with others in discussions, seminars and workshops (Hock, 2018). Physical activity enhances brain function through physiological mechanisms and higher-level executive functions like creativity and decision-making, which are critical for cognitive performance in students, including memory and attention. It has also been demonstrated that sports can prevent risky behaviors in adolescents (Alvarez-Bueno et al., 2017). Because of games and sports, school teams represent their schools outside of the classroom. This enables them to boost their sense of belonging to the organization they represent while also keeping them happy and at ease in the educational system due to the numerous possibilities they have to express themselves (Hock, 2018; Milambo & Pacho, 2021)

Therefore, considering the literature above, the relationship between learning environment and students' engagement has not been highly researched especially in Ugandan

universities. Due to this gap, it was pertinent that this study using Ndejje University in central Uganda, tests the relationship between student accommodation facilities and academic engagement of undergraduate students.

2.2.3 The quality of student accommodation utilities and academic engagement of

Undergraduate students

Utilities are services such as the supply of water, the supply of electricity and provision of health and sanitation. The significance of quality of student accommodation utilities in determining academic engagement and general student well-being is becoming more widely acknowledged.

Considering the supply of water as accommodation utility, water is crucial in many aspects of living a great life. Hence, student housing facilities require a continual flow of water. Piped water has a number of advantages for households, communities and society as a whole, but uneven access to water and sanitation can have serious consequences on health and education (The World Bank: International Bank for Reconstruction and Development [IBRD], 2018). As a result of improved access, students are less likely to contract waterborne infections or diseases associated with contact with excreta (WASH Timor-Leste, 2016). Thus students can do better in school and reach higher levels of education if they are in better health (Santiago et al., 2015), and when they are physically fit, they participate actively in classroom activities and get greater academic results (Turcuator & Cahapay, 2020). Dehydration has been linked to problems with cognitive differentiation and short-term memory. As a result, a shortage of water reduces the student's cognitive capacity, lowering their academic engagement (Santiago, et al. 2015).

So, schools must have well-developed Water, Sanitation, and Hygiene [WASH] facilities. According to WASH Timor-Leste report (2016) a school with sufficient WASH

services has a working and dependable infrastructure for supplying water enough for all students desires these include: hand-washing, drinking, toilet use. The school should have enough private, secure restrooms for both students and instructors, accessible, clean, and separate for males and females. When they are in bad shape, a large proportion of students avoid using WASH facilities, which has negative effects on their health, well-being, and cognitive function (UNESCO, 2019).

Cahapay (2020) posit that poor hygiene accounts for around 10% of the worldwide illness. In line with this, it is imperative for educational institutions to build positive setting where students are in good physical shape, occupied and set to study as a vital element in increasing their academic engagement and bridging the performance disparity. This is based on the observation that healthy students are better learners (Tamika & Lisa, 2016). To this end, sanitary and cleanliness practices must be incorporated into the school curriculum and promoted through extra-curricular and co-curricular activities (WASH Timor-Leste, 2016). With this, one can build on the momentum to making the school a place that promotes health by having additional environmental or non-environmental elements that are pertinent such as physical and nutritional health.

Similarly, Brown et al. (2022) highlights that poor quality utilities may cause students' stress levels to rise and interfere with their study habits. According to their research, students who reside in residences that frequently experience utility problems such as power or water outages performed worse academically and had greater absenteeism rates. This shows that students' capacity to uphold regular attendance and study habits is directly correlated with the quality of their housing. In a study by Chen and Zhao (2023), academic engagement is strongly correlated with the quality of living conditions. According to their research, students who reside in well-maintained housing with high-quality utility services

tend to participate in extracurricular activities more frequently and exhibit greater levels of academic engagement.

The study by Lee and Park (2024) which explored the psychological aspects of living conditions and their impact on academic engagement discovered that unfavourable living circumstances such as insufficient heating and erratic internet, might cause students to feel frustrated and powerless, which has a detrimental effect on their motivation and involvement in the classroom. They concluded that cultivating a favourable academic environment requires guaranteeing high-quality accommodations utilities. Similarly, Martinez and Rodriguez (2020), argue that students can feel more connected to one another if they live in good accommodation with dependable utilities. Peer support and teamwork are fostered in this communal setting and are essential for academic engagement and achievement. The study also found that inclusive accommodation regulations can lessen the academic gaps between students from various socioeconomic backgrounds by guaranteeing equitable access to high-quality utilities.

Electricity is another utility that is important in student accommodation spaces. If schools have electricity, classes for children and adults can be held even in the late hours due to enhanced lighting (Technical Consumer Products [TCP], 2017). Furthermore, projectors, the internet, films, and other modern technologies and media can be employed for teaching. The UNDESA report (2019) indicates that having access to power helps the introduction of ICTs into the classroom, such as laptops and televisions, as well as the availability of lighting, allowing students to study for extended periods of time. Aside from the better learning environment at school, Hartmann (2018); Sovacool, et al (2012) posit that electricity increases the quantity and quality of studying by allowing it to be done at various hours of the day by providing power and better lighting. When there is enough electricity to provide more than just lighting and power, modern media and information resources such as internet boost

attendance, retention and achievement of students and teachers and students have access to a variety of media which allows them to conduct science experiments, study about current events far away from their communities, and engage with others (Internet Society, 2017).

Therefore, considering the literature above, the relationship between the quality of student accommodation utilities and academic engagement of undergraduate students has not been highly researched especially in Ugandan universities. Due to this gap, it was pertinent that this study using Ndejje University in central Uganda tests the relationship between the quality of student accommodation utilities and academic engagement of undergraduate students.

2.3 Literature Gap

The reviewed studies were conducted mostly in foreign contexts and largely focused on western contexts, examining factors such as the quality of housing, the distance from campus, and the availability of study spaces unlike this study that was carried out in Uganda. The reviewed studies focused on a cross-section of school types that is; secondary schools, colleges, universities, and with little focus private universities unlike this study which focused on a private university in central Uganda where there is no government funding. Some other studies which have been conducted on student accommodation have made comparisons with other aspects like student performance, student adaptability to learning among others. A cross-section survey design was utilized in the study to collect quantitative data for reasons of finding out how the results relate with government funded universities. Further still, all the reviewed studies never investigated the relationship between accommodation and academic engagement of undergraduate students at Ndejje University in central Uganda. Some of the studies reviewed were conducted in western Uganda which created a geographical gap thus this study focused on central Uganda. Most existing research

does not account for the unique socio-economic and cultural factors influencing academic engagement in Uganda private universities.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter details the research approach, design, study population, sample size, sampling technique, data collection methods, instruments' validity and reliability, data analysis procedure and ethical considerations.

3.1 Research approach

The study employed a quantitative methodology, which involves systematic empirical investigation of an observable phenomenon using statistical, mathematical, or computer approaches (Creswell, 2023). According to Silverman (2017) Quantification boosts the researcher's self-assurance in the correctness of conclusions drawn from qualitative data by allowing him/her to work through the facts on their own before accepting the conclusions. Thus the researcher used this approach in conducting the research.

3.2 Research design

The research was conducted using cross sectional research design at Ndejje University in central Uganda. In this kind of study, either the whole population or a subset of it is selected. Data is collected from these persons to help answer research questions. The information concerning X and Y got is called cross-sectional because it only portrays what is occurring at one point in time. According to Setia (2016) the investigator measures the research participants' outcomes and exposures. According to Wang and Cheng (2020), cross-sectional survey research design enables the researcher to compare a variety of factors at once effectively with little expense. This kind frequently bases on a questionnaire survey. This design was appropriate for this investigation because it was low-cost and it takes very little time to carry out.

3.3. Target Population

Target population is the totality of the people or things to which researchers apply their conclusions in general. It encompasses each and every person or thing that satisfies the precise requirements established by the researcher. According to Johnson et al. (2019), research findings are better suited for wide application when the study population is clearly defined, and Smith (2018) notes that it improves the validity of the study and lessens selection bias. The researcher collected data from undergraduate students of the four sampled faculties Education, Social sciences and Arts, Science and Computing and Health Science. From each faculty, the researcher targeted 105 undergraduates giving a total target population of 420 undergraduate students.

3.4 Sample size and sampling technique

The sample size for the study was determined by the researcher using Krejcie & Morgan's table because of its being an effective method for coming up with a representative sample size in empirical research for population ranging between $N=10$ to $N=100,000$.

Table 3. 1: Target population and sample size

Category	Target population	Sample size
Undergraduate student	420	201

Source: Ndejje University Faculty Documents (2023).

The study employed a stratified sampling strategy. Considering the gender of the respondent, such as male and female students, residence of students like on campus and off campus, the year of study like year one and continuing students, year one and finalists. The researcher divided a population into homogeneous subpopulations called strata. Every person in the

population being researched fell into one of the strata. Each stratum was then sampled using simple random sampling to allow the researcher to estimate statistical measures for each sub-population. This technique was used since it included subjects from every subgroup, ensuring that it reflects the diversity of the population. Besides that, stratified sampling was theoretically possible that this could not happen when using other sampling methods such as simple random sampling.

3.5 Data Collection Methods

The study utilized the questionnaire survey method to collect data.

3.5.1 Questionnaire Survey Method

The questionnaire survey method gives uniform information and ensures data comparability (Taherdoost, 2016b). Compared to other methods, it requires fewer interviewing skills. This method was suitable for obtaining information from several respondents for this study, because it takes less time and does not necessitate as many interviewing skills. It was useful for gathering primary data from students.

3.6 Data Collection Instrument

This study utilized a structured questionnaire to gather comprehensive data from respondents, ensuring adequate interaction and time spent using the tool. According to Taherdoost (2016a) questionnaires provide a respondent time to think about the answers without interruption by others, such as an interviewer. Questionnaires are handy to researchers because they allow them to work with a large number of individuals at once and collect data.

To gather quantitative data from respondents, a self-administered, structured questionnaire with closed-ended questions was utilized. The study objectives formed the basis of the questionnaire. The structured questionnaire is ideal for larger samples due to its ease of data acquisition, increased validity, and the ability to modify responses if needed

(Reips & Funke, 2020). The questionnaire was divided into three sections: A, B, and C. Information about the respondents' demographic make-up was included in section A. Statements regarding the dimensions of the independent variable were found in section B. Statements regarding the dimensions of the dependent variable were catered for in section C. On a five-point Likert scale, with 1 representing strongly disagree and 5 representing strongly agree, the statements on the dependent and independent variables were rated. The different dimensions contained a minimum of five and a maximum of eight statements. The questionnaire was self-developed by the researcher with help from the research mentors.

3.7 Procedure for Data Collection

The researcher received an introductory letter from Kyambogo University, which he delivered to the Dean of Students of Ndejje University. The Dean of students assigned a researcher a university staff who introduced him to the respondents. The researcher got some students from the selected faculties to help in mobilizing their fellow students. The researcher briefed the students on the research he was undertaking as a requirement for the award of a Master's degree of Education in Policy, Planning and Management of Kyambogo University, and sought for their consent to participate. To choose students from among those who were contacted to complete the questionnaire, the researcher employed stratified sampling.

3.8 Validity and Reliability

3.8.1 Validity

Validity refers to the degree to which an instrument accurately measures what it is intended to measure, thereby allowing for meaningful inferences. Content validity was established to ensure the self-administered questionnaire's validity to assess the extent to which the test items accurately represent the entire domain of the measured attributes. To determine the Content Validity Index (CVI), the questionnaire was evaluated by two research

experts. Using a two-point rating system, Relevant (R) and Irrelevant (IR), each expert determined the items' relevance. Items that were not thought to be important were either changed or removed.

The CVI was calculated using the formula:

$$CVI = \frac{n}{N}, \text{ Where CVI} = \text{Content Validity Index}$$

n = the number of items declared valid

N= total number of items in the questionnaire

The study instruments are considered valid if the CVI is 0.7 or higher (Shirali, Shekari & Angali, 2018).

The CVI outcomes are shown in Table 3.2.

Table 3. 2: Content Validity Indices

Items	Number of Items	Content Validity Index
Academic engagement	27	0.823
Proximity of student accommodation	5	0.756
Student accommodation facilities	7	0.798
Quality of student accommodation utilities	8	0.746

The Content Validity Index values for all constructs in this test were above the acceptable threshold of 0.7. This indicated that the items in each scale were relevant and representative of their respective constructs. The CVI values ranged from 0.746 to 0.823, with the student academic engagement scale exhibiting the highest CVI. These scores confirmed that the items within each scale were appropriately designed to measure their respective constructs, to provide a robust foundation for further analysis.

3.8.2 Reliability

The consistency of an instrument in measuring the intended outcome over several trials is referred to as reliability. If an instrument continuously yields comparable data under consistent circumstances, it is deemed dependable. To make certain of the reliability of the instruments, a pilot study was conducted at an affiliate campus of Ndejje University in Kampala, in the central region. This approach follows Kombo and Tromp (2006), who emphasize the importance of testing a questionnaire with a representative sample of the population. Reliability was tested using Cronbach's alpha (α) method, as recommended by Noble and Smith (2015). This method was conducted using SPSS software and reliability was determined for various constructs, with a benchmark set at $\alpha = 0.70$ or higher. The Cronbach's alpha results are presented in Table 3.3.

Table 3. 3: Cronbach's Alpha Results

Items	Number of Items	Cronbach's Alpha
Academic engagement	27	0.875
Proximity of student accommodation	5	0.746
Student accommodation facilities	7	0.754
Quality of student accommodation utilities	8	0.756

The study's instruments were deemed credible as all of the constructs' Cronbach's Alpha values were higher than the generally recognized cutoff point of 0.7. The values ranged from 0.746 to 0.875, with the academic engagement exhibiting the highest reliability. These results verified that each scale's items were suitably created to measure the corresponding constructs in a consistent manner.

3.9 Data Analysis and presentation

Data analysis involves reviewing, cleansing, manipulating, and modeling data with the objective of identifying usable information, drawing conclusions, and assisting decision-making (Herrman, 2009). After data collection, the researcher carried out data validation, data editing and data coding. By classifying responses from different respondents and using descriptive and inferential statistics, quantitative data was statistically analyzed. Bar graphs and frequency tables were employed to present the results.

3.9.1 Quantitative data analysis

During quantitative analysis, the researcher used SPSS version 21 to do descriptive and inferential data analysis. Descriptive analysis entailed frequency tables and determination of measures of central tendency such as means and measures of dispersion that was standard deviations on the variable dimensions. At a 0.05 level of significance, Pearson correlation analysis was used to analyze the effect of the independent variables on the dependent variable in order to offer responses to study hypotheses. The strength of the relationship between the outcome (dependent variable) and the predictor variable was determined using linear regression analysis (Bryman & Cramer, 2012).

3.10 Ethical Considerations

The researcher ensured honesty and integrity in the conduct of research through following the research methods and procedures as well as using and acknowledging the research work of others. Respect for participants was also taken care of through ensuring informed consent in the filling of questionnaires. In order to provide the respondents the option to engage in the study or not, the researcher outlined to them its aim. Those who agreed signed consent forms. Objectivity to avoid bias was also considered through standardization of testing procedures. The researcher ensured high level of confidentiality in data collection by protecting the

identity of respondents by not having them write their names on the questionnaires so as not to link respondents' identities to their responses. Careful review of work to ensure credible results was also taken care of. This was first based on ensuring reliability and validity of the developed research questionnaire, clarity during data analysis and interpretation.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.0 Introduction

The chapter shows the findings to this study about student accommodation and academic engagement at Ndejje University in central Uganda. It gives presentation, interpretation, and analysis. The statistics produced helped in analysing responses of participants from the field. Descriptive statistics; mostly frequency and percentage tables, were derived from Statistical Package for Social Sciences (SPSS).

4.1 Response Rate

The researcher sampled 201 students and had 201 questionnaires that were administered. Data collected was obtained was from the 120 students. The response rate was 60.0%. This implies that the researcher used information from the 60.0% of the participants to write the information of this study. This was sufficient because according to Nkodde (2018), a response rate above 50% is acceptable and relays accurate information about the population under study.

4.2 Background Characteristics of the Respondents

This section presents data on the background characteristics of students including gender, age, faculty, year of study, and residence.

The results on the same are presented in Table 4.1.

Table 4. 1; Background Characteristics of the Respondents

Characteristics	Categories	Frequency	Percent
Gender	Male	75	62.5
	Female	45	37.5
	Total	120	100.0
Age	Below 20years	32	26.7
	21-24years	65	54.2
	25-30years	12	10.0
	Above 30years	11	9.1
	Total	120	100.0
Faculty	Social Sciences & Arts	18	15.0
	Education	24	20.0
	Science & Computing	62	51.7
	Health Sciences	16	13.3
	Total	120	100.0
Year of Study	Year I	20	16.7
	Year II	51	42.5
	Year III	44	36.7
	Year IV	05	4.1
	Total	120	100.0
Residence	On campus	76	63.3
	Campus suburb	27	22.5
	Far from Campus	17	14.2
	Total	120	100.0

Source: Field data, 2023

The results on gender of the respondents showed that a bigger percentage 62.5% of the respondents were male while 37.5% were female. Data on age groups of respondents revealed that the respondents were in four age groups of which many ranged between 21-24years constituting to 54.2%. They were followed by those of below 20 years with 26.7% while 10% of the students were aged between 25-30years. Those above 30 years constituted 9.1%. These results meant that students of different age groups participated in this study. Therefore, responses representative of views of different age groups were captured.

With regard to respondents' faculty, the biggest percentage of 51.7% was in science and computing, followed by 20% who were in Education, 15% of the respondents were in Social Sciences & Arts and 13.3% were in Health Sciences. According to these findings, the respondents were from different faculties in the university. Hence, appropriate responses were obtained.

Concerning the year of study, most of the respondents (42.5%) as shown in the table 4.1 above were in year II, followed by 36.7% who were in year III, 16.7% were in year I and 4.1% were studying in their fourth year. It was also observed that 63.3% of the respondents were residing on campus, followed by 22.5% who were staying in campus suburb and only 14.2% were staying far from campus.

4.3 Results on Academic Engagement

The study (table 4.2) looked at student's academic engagement in relation to behavioural, affective, cognitive, and agentic engagement. To correlate the results of student's engagement (numerical data) based on the Likert scale, the results were converted into percentages and recorded into SPSS for further analysis.

Table 4. 2: Academic Engagement

Academic Engagement	SD	D	U	A	SA	Mean	Std. Dev
Behavioural engagement							
I try hard to do well in my university	16.7% (20)	9.2% (11)	15.0% (18)	41.7% (50)	17.5% (21)	3.34	1.332
I work as hard I can while on my studies	16.7% (7)	9.2% (4)	15.0% (13)	41.7% (72)	17.5% (24)	3.10	1.273
I pay attention during lectures	5.8% (11)	3.3% (7)	10.8% (35)	60.0% (55)	20.0% (12)	3.85	0.976
When I am in lectures, I fully participate in all activities	9.2% (19)	5.8% (9)	29.2% (14)	45.8% (73)	10.0% (5)	3.42	1.058
When I run into a difficult study problem, I keep working on it until I have solved it	15.8% (19)	7.5% (11)	11.7% (1)	60.8% (58)	4.2% (31)	3.30	1.185
I take an active role in extra-curricular activities in my university	15.8% (19)	9.2% (11)	.8% (1)	48.3% (58)	25.8% (31)	3.59	1.381
I am an active participant in university activities such as sports gala	11.7% (14)	5.8% (7)	8.3% (10)	44.2% (53)	30.0% (36)	3.75	1.272
I volunteer to help with university activities such as sports gala	17.5% (21)	5.8% (7)	-	39.2% (47)	37.5% (45)	3.73	1.459
Affective engagement							
Learning is interesting to me	15.8% (19)	11.7% (14)	15.0% (18)	52.5% (63)	5.0% (6)	3.19	1.204
I enjoy learning new things during lectures	15.8% (19)	16.7% (20)	7.5% (9)	30.0% (36)	30.0% (36)	3.42	1.464
I am very interested in learning	10.0% (12)	13.3% (16)	20.0% (24)	50.0% (60)	6.7% (8)	3.30	1.105
I like what I am learning at this university	10.0% (12)	20.0% (24)	7.5% (9)	44.2% (53)	18.3% (22)	3.41	1.273

I am happy to be at this university	15.0% (18)	10.0% (12)	18.3% (22)	45.8% (55)	10.8% (13)	3.28	1.236
I am proud to be at this university	13.3% (16)	10.0% (12)	23.3% (28)	28.3% (34)	25.0% (30)	3.42	1.326
I like my university	10.0% (12)	5.8% (7)	13.3% (16)	65.8% (79)	5.0% (6)	3.50	1.037
Cognitive engagement							
When I study, I try to understand the material better by relating it to things I already know	11.7% (14)	9.2% (11)	25.0% (30)	46.7% (56)	7.5% (9)	3.29	1.118
When learning new information, I try to put these ideas in my own words	9.2% (11)	15.0% (18)	20.0% (24)	45.8% (55)	10.0% (12)	3.33	1.131
I make up my own examples to help me understand the important concepts I learn at university	12.5% (15)	20.8% (25)	13.3% (16)	39.2% (47)	14.2% (17)	3.22	1.278
When I study, I figure out how the information might be useful in the real world	15.0% (18)	5.8% (7)	14.2% (17)	59.2% (71)	5.8% (7)	3.35	1.171
When I study, I try to connect what I am learning with my own experiences	13.3% (16)	17.5% (21)	30.0% (36)	28.3% (34)	10.8% (13)	3.06	1.197
When I learn new things, I often try to associate them with what I learnt in other lectures about the same or similar things	9.2% (11)	10.8% (13)	7.5% (9)	55.8% (9)	16.7% (67)	3.60	1.162
Agentic engagement							
During lectures, I express my preferences and opinions	11.7% (14)	40.0% (48)	20.0% (24)	18.3% (22)	10.0% (12)	2.75	1.183
I adjust to whatever we are	7.5% (9)	10.8% (13)	16.7% (20)	58.3% (71)	6.7% (8)	3.46	1.028

learning so I can learn as much as possible	(9)	(13)	(20)	(70)	(8)		
I let my lectures know what I need and want	20.0% (24)	37.5% (45)	17.5% (21)	19.2% (23)	5.8% (7)	2.53	1.181
I let my lectures know what I am interested in	23.3% (28)	35.8% (43)	10.8% (13)	25.0% (30)	5.0% (6)	2.53	1.236
I try to make whatever we are learning interesting as possible	9.2% (11)	15.0% (18)	30.0% (36)	35.8% (43)	10.0% (12)	3.23	1.111
During lectures, I ask questions to help me learn	9.2% (11)	10.8% (13)	20.0% (24)	32.5% (39)	27.5% (33)	3.58	1.254

Source: Field data, 2023

The findings in Table 4.2 on behavioral engagement on whether students tried hard to do well at the university, the mean = 3.34 which was above average. This suggested that students were moderately satisfied with the effort they put in to do well at the university. Concerning whether students worked as hard they can while on studies, the mean = 3.10. This meant that students were fairly hard working while on studies. Regarding whether students paid attention during lectures, the mean = 3.85 was above average. This meant that students highly paid attention during lectures. As to whether when in lectures, students fully participated in all activities, the mean = 3.42. This implied that the students moderately participated in lecture activities. About when students run into a difficult study problem, whether they kept working on it until they have solved it, the results showed a mean of 3.30. This indicated a slightly moderate positive attitude here. As to whether students took an active role in extracurricular activities at the university, the mean = 3.59. This indicated a moderately active student role in extracurricular activities. Concerning whether students actively participated in university activities such as sports gala, the mean = 3.75 which is above average. This implied a moderately active student participation in sports gala. On whether students volunteered to help with university activities such as sports gala, the mean = 3.73 which also

was above average. This implied that students moderately volunteered to help with university activities such as sports gala.

On affective engagement, data findings concerning whether learning was interesting to students, the mean = 3.19. This indicated a slightly moderate interest students had to learning. On whether students enjoyed learning new things during lectures, the mean = 3.42. This indicated that students had a moderately positive interest to learning. Concerning whether students are interested in learning, mean = 3.30. This implied that students had a slightly moderate interest in learning. About whether students liked what they learned at the university, the mean = 3.41. This indicated students moderately liked what they learned at the university. With respect to whether students were happy to be at the university, the mean = 3.28. This indicated that students were slightly moderately happy to be at the university. On whether students were proud to be at the university, mean = 3.42. This indicated that students were moderately happy to be at the university. About whether students liked the university, mean = 3.50 which is above average. This indicated a moderately positive students liking of the university.

The data findings with regard to cognitive engagement on whether when students study, they tried to understand the material better by relating it to things they already knew, showed mean = 3.29. This meant a moderately favorable students agreement that they tried to understand the material better by relating it to things they already knew. As to whether students when learning new information, they tried to put these ideas in their own words, mean = 3.33. This indicated a moderately favorable student agreement that when learning new information, they tried to put these ideas in their own words. With respect to whether students made up their own examples to help them understand the important concepts, the results showed mean = 3.22. This implied a slightly moderate agreement by the students that they made up their own examples to help them understand the important concepts.

Considering when students studied at the university whether they figured out how the information might be useful in the real world, the mean = 3.35. This indicated a moderately favorable student agreement that when they studied at the university, they figured out how the information might be useful in the real world. About whether when students study, they tried to connect what they learned with their own experiences, results showed mean = 3.06. This indicated a somewhat uncertain attitude due to the students mixed responses thus a slightly moderate agreement by the students that when they study, they tried to connect what they learned with their own experiences. With regard to whether when students learned new things, they often tried to associate them with what they learnt in other lectures about the same or similar things, results showed mean = 3.60. This implied a moderately favorable agreement by the students that when they learned new things, they often tried to associate them with what they learnt in other lectures about the same or similar things.

The data findings on agentic engagement on whether students during lectures expressed their preferences and opinions, the mean = 2.75. This implied a moderately negative student response that they do not so often express their preferences and opinions during lectures. As regards whether students adjusted to whatever they learned so as to learn as much as possible, the results showed mean = 3.47. This implied a moderately positive response by the students that they adjusted to whatever they learned so as to learn as much as possible. Concerning whether students let the lectures know what they needed and wanted, mean = 2.52. This indicated a negative student's response that students did not often let the lectures know what they needed and wanted. About students letting the lectures know what they were interested, mean = 2.53. This indicated still a negative student's response that they did not often let the lectures know what they were interested. As to whether students tried to make whatever they learned interesting as possible, results showed mean = 3.23. This implied a moderately positive student response that they tried to make

whatever they learned interesting as possible. Concerning whether during lectures students, asked questions to help them learn, mean = 3.56. This suggested that students moderately asked questions during lectures to help them learn.

The data was transformed and the summary statistics as indicated in Table 4.3 below was created:

Table 4. 3:Descriptive Statistics for Academic Engagement

	Descriptive	Statistic	Std. Error
Academic Engagement	Mean	3.49	.08
	95% Confidence Interval for Mean	3.33	
		3.64	
	5% Trimmed Mean	3.54	
	Median	3.89	
	Variance	.74	
	Std. Deviation	0.86	
	Minimum	1.07	
	Maximum	4.96	
	Range	3.89	
	Interquartile Range	0.77	
	Skewness	-1.26	.22
Kurtosis	1.07	.44	

Source: Field data, 2023

Findings in Table 4.3 show that mean = 3.49 which indicates that student’s academic engagement was very high. The standard deviation = 0.86 suggested a moderate dispersion in the responses which suggested that the results were normally distributed and so could be subjected to correlation and regression. Therefore, student’s academic engagement was good.

4.4 Results on Student Accommodation

Student accommodation (independent variable) was conceptualized as proximity of student accommodation, student accommodation facilities and quality of student accommodation utilities. Descriptive results on the same are presented below:

4.4.1. Proximity of Student Accommodation

Proximity of student accommodation, the first indicator of student accommodation was studied using 5 question items (Appendix 1). The results on proximity of student accommodation include descriptive statistics and the obtained responses are presented in Table 4.4 below:

Table 4. 4: Proximity of Student Accommodation

Statement	SD	D	U	A	SA	Mean	S/dvn
I can easily reach at the university and attend lectures	8 (6.7%)	20 (16.7%)	7 (5.8%)	34 (28.3%)	51 (42.5%)	3.83	1.32
I can easily participate in activities at the university even during odd hours because my hostel/place of abode is close	5 (4.2%)	17 (14.2%)	16 (13.3%)	75 (62.5%)	7 (5.8%)	3.52	.953
I can quickly access and use the computer labs and library at the university for study and research from my hostel/place of abode	14 (11.7%)	14 (11.7%)	14 (11.7%)	76 (63.3%)	2 (1.7%)	3.32	1.09
I can use the games and sports facilities at the university any time of the day	12 (6%)	8 (6.7%)	14 (11.7%)	34 (28.3%)	64 (53.3%)	3.28	.918
I easily walk to and from the university to my hostel/place of abode	2 (1.7%)	3 (2.5%)	23 (19.2%)	87 (72.5%)	5 (4.2%)	3.75	.651

Source: Field data, 2023

The results in Table 4.4 on whether students could easily reach the university and attend lectures showed the mean = 3.83 which is above average. This indicated that students positively agreed that they could easily reach the university and attend lectures. As regards whether students could easily participate in activities at the university even during odd hours because their hostel/place of abode is close, the results showed mean = 3.52. This suggested that the respondents agreed that they could easily participate in activities at the university even during odd hours because their hostel/place of abode is close.

Moreover, concerning whether students could quickly access and use the computer labs and library at the university for study and research from their hostel/place of abode, mean = 3.32. This implied that students could fairly access and use the computer labs and library at the University for study and research from their hostel/place of abode. As regards to whether students could use the games and sports facilities at the university any time of the day, the results showed mean = 3.28. This suggested that students could fairly use the games and sports facilities at the university any time of the day. Considering whether students could easily walk to and from the university to their hostel/place of abode, mean = 3.75. This indicated that students positively agreed that they could easily walk to and from the university to their place of abode.

To assess how overall proximity rated student accommodation, an average index was calculated for the five items measuring the concepts.

The outcomes on the same are shown in Table 4.5.

Table 4. 5: Summary Table for Proximity of Student Accommodation

	Descriptive		Statistic	Std. Error
Proximity of student accommodation	Mean		3.66	.07152
	95% Confidence Interval for Mean	Lower Bound	3.55	
		Upper Bound	3.84	
	5% Trimmed Mean		3.78	
	Median		4.00	
	Variance		1.02	
	Std. Deviation		0.24	
	Minimum		1.00	
	Maximum		4.71	
	Range		3.71	
	Interquartile Range		.86	
	Skewness		-1.30	.17
	Kurtosis		.53	.34

Source: Field data, 2023

The summary results in Table 4.5 indicate a mean= 3.66 close to the median= 4.00 which suggests that the results were normally distributed. The high mean also suggested that the respondents rated student accommodation to the high.

To determine whether results on proximity of student accommodation were normally distributed an average index for the five items measuring the construct was calculated and a histogram drawn as shown in figure 4.1.

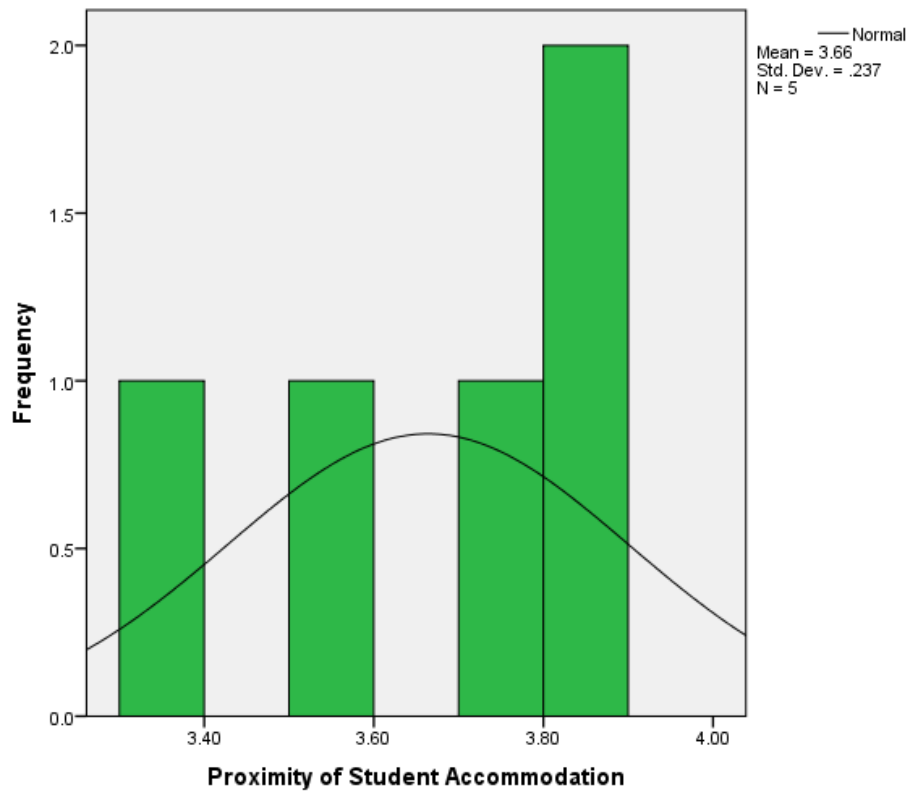


Figure 4. 1; Histogram form proximity of student accommodation

Source: Field data, 2023

The results in figure 4.1 show an average mean of 3.66 which suggest that students moderately agreed. The standard deviation of 0.237 was low suggesting that the results were normally distributed. The average mean meant that proximity of accommodation was fair while the low standard deviation suggested low dispersion in the process. Therefore data on proximity of student accommodation could be subjected to linear correlation and regression.

4.4.2 Student accommodation facilities

Student accommodation facilities the second indicator of student accommodation was studied using 8 question items (Appendix 1). The results on student accommodation facilities include descriptive statistics and the obtained responses are presented in Table 4.6 below:

Table 4. 6: Student Accommodation Facilities

Statement	SD	D	U	A	SA	Mean	S/dvn
The overall infrastructure of my hostel/place abode is beautiful	10	18	14	73	5	3.38	1.06
	(8.3%)	(15%)	(11.7%)	(60.8%)	(4.2%)		
The reading space at my hostel/place of abode is spacious and well aerated	6	16	13	80	5	3.52	.952
	(5%)	(13.3%)	(10.8%)	(66.7%)	(4.2%)		
My hostel/place of abode has sufficient study space	10	12	8	85	5	3.53	1.02
	(8.3%)	(10.0%)	(6.7%)	(70.8%)	(4.2%)		
My hostel/place of abode has open spaces for study and leisure	20	22	6	67	5	3.13	1.25
	(16.7%)	(18.3%)	(5%)	(55.8%)	(4.2%)		
My hostel/place of abode has good games and sports facilities	18	14	6	78	4	3.30	1.19
	(15%)	(11.7%)	(5.0%)	(65.0%)	(3.3%)		
My hostel/place of abode is very safe and my security is guaranteed	18	15	7	72	8	3.31	1.23
	(15%)	(12.5%)	(5.8%)	(60%)	(6.7%)		
My hostel/place of abode has a common room for leisure and entertainment with a TV connected to DSTV	14	10	11	80	5	3.43	1.10
	(11.7%)	(8.3%)	(9.2%)	(66.7%)	(4.2%)		

Source: Field data, 2023

The results in Table 4.6 on whether the overall infrastructure of the hostel/place abode was beautiful, results showed mean =3.38. This suggested that student moderately agreed that the overall infrastructure of the hostel/place of abode was beautiful. As regard to whether the reading space at the hostel/place of abode was spacious and well aerated, results showed mean = 3.52. This suggested that students moderately agreed that the reading space at the hostel/place of abode was spacious and well aerated. As to whether the hostel/place of abode had sufficient study space, mean = 3.53. This also suggested that students moderately agreed

that their hostel/place of abode was spacious and well aerated. Considering whether the hostel/place of abode had open spaces for study and leisure, mean = 3.13. This indicated that students fairly agreed that their hostel/place of abode had open spaces for study and leisure.

On whether the hostel/place of abode had good games and sports facilities, results showed with mean = 3.30. This suggested that students moderately agreed that their hostel/place of abode had good games and sports facilities. Concerning whether the hostel/place of abode was very safe and students security was guaranteed, mean = 3.31. This indicated that students moderately agreed that their hostel/place of abode was very safe and student's security was guaranteed. As regards whether the hostel/place of abode had a common room for leisure and entertainment with a TV connected to DSTV, the results showed mean= 3.54. This suggested that students moderately agreed that their hostel/place of abode had a common room for leisure and entertainment with a TV connected to DSTV.

To find out how overall students rated student accommodation, an average index was calculated for the eight items measuring the concepts. Table 4.7 shows the outcomes for the same.

Table 4. 7:Summary Table for Student Accommodation Facilities

	Descriptive		Statistic	Std. Error
Student Accommodation Facilities	Mean		3.39	.10
	95% Confidence Interval for Mean	Lower Bound	3.15	
		Upper Bound	3.55	
	5% Trimmed Mean		3.40	
	Median		4.00	
	Variance		1.21	
	Std. Deviation		.143	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.47	
	Skewness		-1.039	.221
	Kurtosis		-.282	.438

Source: Field data, 2023

The summary results in Table 4.7 indicate a mean= 3.39 close to the median= 4.00 which suggests that the results were normally distributed. The high mean also suggested that the respondents rated student accommodation facilities to the high.

To determine whether results on student accommodation facilities were normally distributed an average index for the seven items measuring the construct was computed and a histogram drawn as shown in figure 4.2.

The Content Validity Index values for all constructs in this study are above the acceptable threshold of 0.7, indicating that the items in each scale are relevant and representative of their respective constructs. The CVI values range from 0.746 to 0.823, with the student

engagement scale exhibiting the highest content validity. These results confirm that the items within each scale are appropriately designed to measure their respective constructs, providing a robust foundation for further analysis. The instruments are deemed suitable for capturing the intended dimensions of student accommodation, ensuring that the study's findings are valid and accurately reflect the constructs being measured.

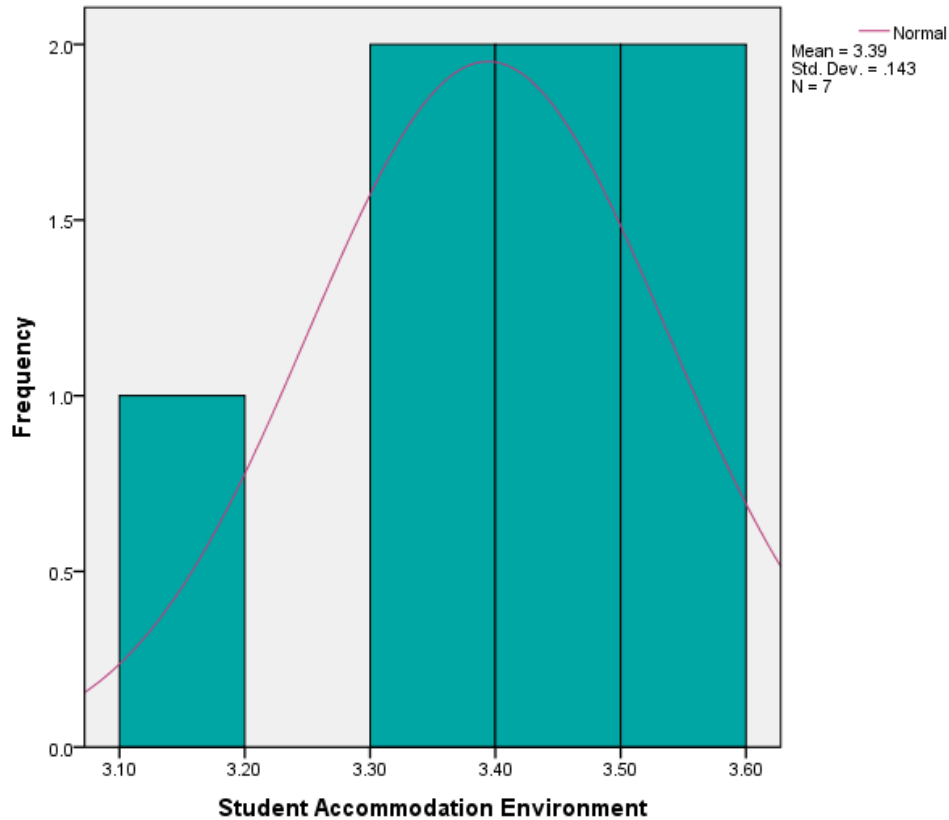


Figure 4. 2: Histogram for student accommodation facilities

Source: Field data, 2023

The results in figure 4.2 show an average mean of 3.39 which suggest that students moderately agreed. The standard deviation of 0.143 was low suggesting that the results were normally distributed. The average mean meant that student accommodation facilities were fair while the low standard deviation suggested low dispersion in the process. Therefore data

on student accommodation environment could be subjected to linear correlation and regression.

4.4.3 Quality of Student Accommodation Utilities

Quality of student accommodation utilities, the third indicator of student accommodation was studied using 6 question items (Appendix 1). The results on student accommodation environment include descriptive statistics and the obtained responses are presented in Table 4.8 below:

Table 4. 8: Descriptive Statistics for Quality of Student Accommodation Utilities

Statement	SD	D	U	A	SA	Mean	S/dvn
My hostel/place of abode is connected to sufficient electricity	12	20	10	78	-	3.28	1.07
	(10%)	(16.7%)	(8.3%)	(65%)	-		
My hostel/place of abode has functional and reliable source of safe and sufficient constant water for different activities	32	14	-	46	28	2.73	1.23
	(26.7%)	(11.7%)	-	(38.3%)	(23.3%)		
The toilets at my hostel/place of abode are always clean	10	22	10	73	5	3.34	1.09
	(8.3%)	(18.3%)	(8.3%)	(60.8%)	(4.2%)		
There are separate toilets for males and females at my hostel/place of abode	30	12	22	52	4	2.90	1.29
	(25%)	(10%)	(18.3%)	(43.3%)	(3.3%)		
The toilets at my hostel/place of abode have enough stances	26	22	-	58	14	2.87	1.24
	(21.7%)	(18.3%)	-	(48.3%)	(11.7%)		
My hostel/place of abode has functional and strategically located hand washing points	33	9	16	60	2	2.91	1.32
	(27.5%)	(7.5%)	(13.3%)	(50%)	(1.7%)		
The sickbay at my hostel/place of abode manages students sicknesses effectively	-	17	16	74	13	3.69	.848
	-	(14.2%)	(13.3%)	(61.7%)	(10.8%)		
My hostel/place of abode has fire safety measures in place like smoke detectors and fire extinguishers	6	14	11	75	14	3.64	1.00
	(5%)	(11.7%)	(9.2%)	(62.5%)	(11.7%)		

Source: Field data, 2023

The results indicated in Table 4.8 on whether the hostel/place of abode was connected to sufficient electricity, results showed mean = 3.28. This indicated that moderately, the hostel/place of abode was connected to sufficient electricity. As regards whether the hostel/place of abode has functional and reliable source of safe and sufficient constant water for different activities, mean = 2.73. This suggested that fairly, the hostel/place of abode has functional and reliable source of safe and sufficient constant water for different activities. As to whether the toilets the hostel/place of abode were always clean, results showed mean = 3.34. This suggested that the toilets were moderately clean at the hostel/place of abode. With respect to whether there were separate toilets for males and females at the hostel/place of abode, results indicated mean = 2.90. This suggested that fairly, the toilets were separate for males and females at the hostel/place of abode.

With regard to whether the toilets at the hall/hostel had enough stances, results showed mean = 2.87. This suggested that the toilets at the hall/hostel had fairly enough stances. About whether the hostel/place of abode had functional and strategically located hand washing points, mean = 2.91. This suggested that the hostel/place of abode had fairly functional and strategically located hand washing points. As to whether the sickbay at the hostel/place of abode managed students sicknesses effectively, results indicated mean = 3.69. This indicated that the sickbay at the hostel/place of abode moderately managed student's sicknesses effectively. As regards to whether the hostel/place of abode had fire safety measures in place like smoke detectors and fire extinguishers, mean = 3.64. This suggested that moderately, the hostel/place of abode had fire safety measures in place like smoke detectors and fire extinguishers.

To find out how overall students rated student accommodation, an average index was calculated for the six items measuring the concepts. Table 4.9 shows the outcomes for the same.

Table 4. 9:Summary Table for Quality of Student Accommodation Utilities

	Descriptives		Statistic	Std. Error
Quality of Student Accommodation Utilities	Mean		3.26	.09013
	95% Confidence Interval for Mean	Lower Bound	2.99	
		Upper Bound	3.35	
	5% Trimmed Mean		3.22	
	Median		3.50	
	Variance		.975	
	Std. Deviation		.297	
	Minimum		1.13	
	Maximum		4.38	
	Range		3.25	
	Interquartile Range		1.84	
	Skewness		-.768	.221
	Kurtosis		-.935	.438

Source: Field data, 2023

The summary results in Table 4.9 indicate a mean = 3.26 close to the median = 3.50 which suggests that the results were normally distributed. The high mean also suggested that the respondents rated student accommodation to the high.

To determine whether results on quality of student accommodation utilities were normally distributed an average index for the eight items measuring the construct was calculated and a histogram drawn as shown in figure 4.3.

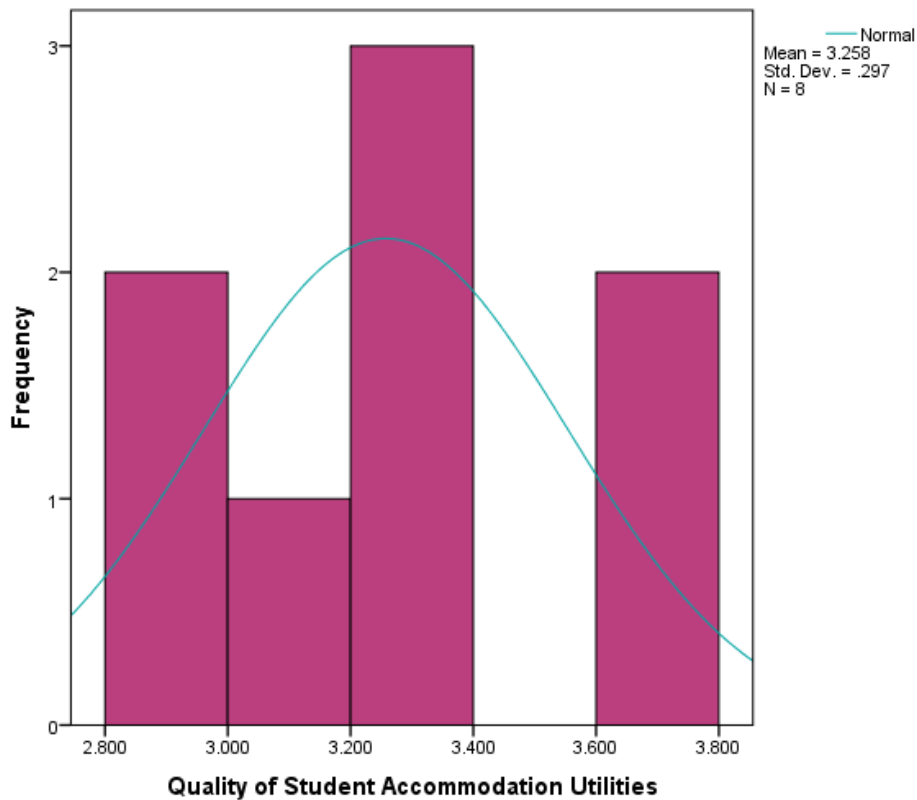


Figure 4. 3: Histogram for quality of student utilities

Source: Field data, 2023

The results in Figure 4.3 show an average mean of 3.25 which suggest that students moderately agreed. The standard deviation of 0.297 was low suggesting that the results were normally distributed. The average mean meant that quality of student accommodation utilities was fair while the low standard deviation suggested low dispersion in the process. Therefore data on proximity of student accommodation could be subjected to linear correlation and regression.

Figure 4.3 shows that the students rated quality of student accommodation utilities to be moderate (mean = 3.258). However, the standard deviation = .287 meant that the results were sparsely distributed. However, with a normal curve, results on quality of student accommodation utilities were fit to correlation and regression analyses.

4.5 Student Accommodation and Academic Engagement

To establish whether student accommodation aspects namely the proximity of student accommodation, the student accommodation facilities and the quality of student accommodation utilities related to academic engagement of undergraduate students at Ndejje University, correlation analysis run using SPSS. Table 4.10 presents the outcomes.

Table 4. 10; Correlation of Student Accommodation and Academic Engagement

	Academic Engagement	Proximity of Student Accommodation	Student Accommodation Facilities	Quality of Student Accommodation Utilities
Academic Engagement	1			
Proximity of Student Accommodation	.675**	1		
Student Accommodation Facilities	.680**	.516**	1	
Quality of Student Accommodation Utilities	.701**	.571**	.635**	1
	.000	.000	.000	.000
**. Correlation is significant at the 0.01 level (2-tailed).				
<i>Source:</i> Field data, 2023				

The results in Table 4.10 suggest that the three elements of student accommodation namely: proximity of student accommodation ($r = 0.675$, $p = 0.000 > 0.01$), student accommodation facilities ($r = 0.680$, $p = 0.000 > 0.01$), and quality of student accommodation utilities ($r = 0.701$, $p = 0.000 > 0.01$) had positive significant relationship with undergraduate students' academic engagement. This meant that all the three hypotheses were rejected. All three

factors namely; proximity of student accommodation, student accommodation facilities, and quality of student accommodation utilities had a significant and positive relationship with student academic engagement. The p-values (<0.01) indicated that these correlations are statistically significant and are unlikely to have occurred by chance. The correlation coefficients (all above 0.65) suggested that these factors had a strong impact on academic engagement. Of the three, quality of student accommodation utilities ($r = 0.701$) had the strongest relationship with academic engagement, followed closely by student accommodation facilities ($r = 0.680$) and then proximity of student accommodation ($r = 0.675$). These results implied that improving the quality of student accommodation utilities, student accommodation facilities, and ensuring accommodation is close to the university could enhance students' academic engagement.

4.6 Regression analysis

At the confirmatory level, to establish whether student accommodation namely; proximity of student accommodation, student accommodation facilities and quality of student accommodation utilities predicted students' academic engagement, a regression analysis was carried out. The outcomes are shown in Table 4.11.

Table 4. 11: Regression of Engagement and Student Accommodation

	Standardized Coefficients	Significance
Student Accommodation	Beta (β)	P
Proximity of student accommodation	0.363	0.000
Student accommodation facilities	0.975	0.000
Quality of student accommodation utilities	0.375	0.000
Adjusted $R^2 = 0.880$		
$F = 291.812, P = .000^b$		

a. Dependent Variable: Academic Engagement

Source: Field data, 2023

The results in Table 4.11 show that student accommodation namely; proximity of student accommodation, Student accommodation facilities and quality of student accommodation utilities explained 88.0% of the variation in students' academic engagement (adjusted R= 0.880). This means that 12% of the variation was accounted for by other factors not considered under this model. All the student accommodation namely; proximity of student accommodation ($\beta = 0.363$, $p = 0.000 < 0.05$), student accommodation facilities ($\beta = 0.975$, $p = 0.000 < 0.05$) and quality of student accommodation utilities ($\beta = 0.375$, $p = 0.000 < 0.05$) had a positive and significant influence on students' academic engagement. This means all the hypotheses (H1-H3) were rejected. The magnitudes of the respective betas suggested that student accommodation facilities had the most significant influence on students' academic engagement followed by quality of student accommodation utilities and proximity of student accommodation respectively.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents discussion of the study findings, conclusions, and recommendations. The discussion of the findings has been done in relation to the literature as guided by specific objectives to this study. The researcher discusses the extent to which each objective is cardinal in different ways.

5.1 Discussion of the findings

5.1.1 Hypothesis One: There is No Significant Relationship between the Proximity of Student Accommodation and Students' Academic Engagement

Proximity of student's accommodation is one of the ways through student's accommodation is managed in universities. The first hypothesis tested the relationship between the proximity of student accommodation and students' academic engagement at Ndejje University. The study found a positive significant relationship, thus, the hypothesis was rejected. The accommodation patterns at Ndejje University conquered with Zotorvie (2017) that students' desire for residential accommodation is a product of aspects such as closeness to lecture rooms, large and well aerated rooms, tranquil and pleasant surroundings, the study area, accommodation charge, the availability of power and water.

Residing in proximity to the university enabled undergraduates to attend lectures punctually and consistently as the burdens of travel time and stress associated with commuting are allayed. This boosts punctuality and preparedness for learning which enhances student engagement in academic activities. The results were consistent with Graham et al. (2018) who established that residence halls are supposedly welcoming and supportive settings that generate quality connections among residents as well as with Ghani

and Noralfishah (2016) who emphasized that proximity of accommodation provides students with comfort, convenience, and safety with a considerable impact on the development of a positive learning environment to meet students educational goals.

On-campus students engaged in more interactive variety and were much more involved in collaborative learning experiences as well as social integration. Etikan et al. (2017) argued that students who stay on campus have more frequent interactions and connections with the institution's local community, which improves their chances of having better learning outcomes. The finding indicated that undergraduates residing within and near the university were more engaged in extracurricular activities even those organized during odd hours. Living close by the University allows for more flexibility and lowers participation barriers like lack of transportation or expensive transportation costs, as well as safety concerns while returning off campus at night. It also allows students to easily access the games and recreational facilities. Participating in games and sports can enhance physical health, team work skills, time management, discipline and overall well-being which qualities are transferable to academic engagement. This involvement thus promoted a sense of togetherness, social networking and nurtures opportunities for practical learning outside the lecture rooms.

Considering the student's perspective, the findings revealed that staying on campus is better for community development and academics than living off campus. Simpson and Burnett (2019) in a study in South-Eastern Virginia looked into the impact of different types of residence halls on general students' academic achievement and found out that the provision of tutoring services, increased academic values rating high. The counseling programs that exist in various halls on or off campus provide a positive effect on students' engagement if effectively administered. According to Mbandlwa (2021) living in university-provided housing provides access to sufficient amenities for productive study sessions. While

according to Liu et al. (2014) and Wang et al. (2017), social environments foster students' competence, relatedness and autonomy which encourage intrinsic drive. For the case of Ndejje University, proximity of accommodation to the university enabled easy access university computer labs and WIFI network. This eases online and virtual learning thus engages students as they work on their assignments, coursework, research and projects. This boosts their interaction with technology for learning compared with the off campus residents. Thus enables extension of learning and academic engagement outside the lecture room and lecture hours.

Furthermore, residing at the University or close to the university within walking distance, promoted a healthier lifestyle of integrating physical activity in the daily routine of students which has a positive influence cognitive function, mental health and academic focus. This is in agreement with Williams and Johnson (2022); Brown and Thompson (2024) who argue that students who feel good about themselves are more likely to participate actively in the learning process and thus are more engaged academically. This is also shared by Mohit and Elsawahli (2017) that students who are content with their halls of residence are less likely to suffer from despair and mobility issues, which can have a negative impact on their academic engagement

Conversely, van Zyl and Fourie-Malherbe (2021) posited that off campus residence allowed commuter students to not only focus on their studies, but also to meet other students in co-curricular spaces and learning communities who are not part of their immediate surroundings in classes and residences, as well as to form unlikely friendships and have conversations that enlighten them. However, this did not significantly apply to the context of Ndejje University since there were no well-developed learning and co-curricular spaces in the neighborhood compared to those at the University. Thus the off campus students benefited more from the amenities within the University. More so, Mason (2020) highlighted that

staying at home prevents students from participating in academic activities such as group assignments and cross-nights due to the financial and physical burdens associated with daily commuting like transportation delays when coming to or from the university. This was also true to students who commuted at Ndejje University.

5.1.2 Hypothesis Two: There is no Significant Relationship between the Student Accommodation Facilities and Students' Academic Engagement

The second hypothesis of the study tested the relationship between the student accommodation facilities and students' academic engagement at Ndejje University. The results indicated that the hypothesis was rejected. The study findings showed that student accommodation facilities at the hostels/places of abode had a significant relationship with students' academic engagement. According to Villanueva et al (2016), the built facilities and neighborhoods around the school can provide areas where students can engage in activities that support pro-social conduct and social emotional engagement. Overpriced, insufficient, overly crowded or too isolated housing is a major additional strain that can negatively affect a student's chances of academic engagement and well-being in general (Jackson et al., 2019). According to Morris et al (2016) decent accommodation facility should have dependable security, well-organized administration and adequate amenities to let students contribute to their academic involvement. Positive connections, improved physical and mental health and easier access to student services are all facilitated by the facilities that are used both inside and outside of school hours (Prati & Cicognani, 2018; Prati & Cicognani 2021). Thus availability, accessibility and utilisation of student accommodation facilities had a greater influence to student's engagement.

At Ndejje University, the overall infrastructure at the student hostels was beautiful. According to Olson and Peterson (2015) the physical experience of students within the accommodation facilities is a facet of engagement and it symbolizes a student's connection to

the school's external environment. The aesthetic quality of the infrastructure of student residences positively impacted on their perception of the living environment. The visual appeal can foster a sense of appreciation and attachment which is linked to boosting student motivation and engagement in academic activities. Therefore students who are content with their halls of residence are less likely to suffer from despair and mobility issues, which can have a negative impact on their academic engagement (Mohit & Elsayahli, 2017).

Some hostels/places of abode had spacious reading and sufficient study spaces which are well aerated. According to Emms (2021) most students use their room as their primary study space, while 10% utilize communal areas within their accommodation. Availability of spacious and well aerated reading spaces within accommodation facilities created conducive atmosphere which enabled students to engage in consistent and productive study habits. Proper ventilation and adequate space is associated with improved concentration, reduced fatigue, necessary comfort and quiet needed for focused self-study as Auwal (2022) argued that private conversations in hostel rooms have the potential to develop into beneficial partnerships that last a lifetime and benefit both parties

Further to this, the hostels/places of abode had some open spaces for study and leisure. These provided a balanced environment for students to transition between intense study sessions and relaxation. Outdoor study areas improve cognitive function, creativity while leisure spaces contribute to stress relief which promotes motivation and focus for academic engagement. They also provide collaboration and social integration avenues for students which foster academic engagement. More so Scott-Webber et al. (2017) observed that outdoor green spaces significantly improve health and academic engagement when they are used in a motivating and appropriate way since being in nature can have a great effect on student engagement. According to a review by Kuo, Barnes and Jordan (2019), nature-based learning improves grades, decreases dropout rates and decreases disruptive events while also increases

interest among disinterested students. Based on this, Heasley et al (2015) advised institutions building new facilities to carefully pay attention to the impact of architectural aspects, including a healthy mix of private and public spaces, equity considerations and educational experience optimization which is evident at Ndejje University. The researcher also agrees with this view as it is healthy for academic engagement.

On top of that the students perceived the hostels/places of abode safe with security guaranteed. This fostered an environment of student focus to engage in academic activities without fear. Secure student accommodation facilities contributed to student's peace of mind. It also encouraged students to stay on campus to participate in late night study sessions and enjoy full University life.

Some hostels/places of abode had a common room for leisure with a television set connected to DSTV. Paloş et al. (2019) note that academic engagement maybe affected by student burnout, a state highly dependent on stress. Common rooms in the residences provided a necessary outlet for relaxation and social interaction outside the lecture rooms. These social hubs enable students to unwind and reduce academic burnout. They also help build a sense of community through clubs and loose associations which can promote increased collaboration in agitating for students' affairs concerns especially academic and welfare issues and peer support for more engaging academic experience. According to Pérez-Salas et al. (2021) individual and contextual factors enhance student involvement by assisting the individual in meeting three important needs: relatedness, autonomy, and competence. Therefore, students' participation is often increased when they feel like they belong at the University. When they do not, behavioral issues are common (Barkley & Major, 2020).

The physical experience of students within their school is a facet of engagement, and it symbolizes a student's connection to the school's external environment (Olson & Peterson, 2015). Good games and sports facilities within the university supported physical health and

mental wellbeing. According to Milambo and Pacho (2021) participating in sports and games builds self-assurance, self-control, teamwork and unity, which enhances both intra-personal and interpersonal skills among students. Regular physical activity is linked to improved concentration, memory, time management, team work, discipline which skills are transferable to academic pursuits. The skills also help students to interact with others in discussions, seminars and workshops (Hock, 2018). Physical activities enhance brain function through physiological mechanisms and higher-level executive functions like creativity and decision-making, which are critical for cognitive performance in students, including memory and attention. It has also been demonstrated that sports can prevent risky behaviors in adolescents (Alvarez-Bueno et al., 2017). Thus participation in games and sports led to student's balanced lifestyle and overall academic engagement fulfilling the old saying; 'Work without play, makes Jack a dull boy!'"

Additionally, electronic learning facilities enabled educators communicate with students outside of the classroom by using websites, social media applications, email and online learning platforms. Having cameras turned on during virtual class sessions fosters a feeling of social and physical proximity (Christopher et al., 2020). If students receive regular, constructive feedback that helps them reach their learning objectives and gives them actionable and understandable information about their efforts, it can boost their academic engagement (Mercer & Dörnyei, 2020). The study by Lee and Park (2024) which explored the psychological aspects of living conditions and their impact on academic engagement too underscores unfavourable living circumstances such as insufficient heating and erratic internet, which might cause students to feel frustrated and powerless. This has a detrimental effect on students' motivation and involvement in the lecture rooms. However at Ndejje University, it is erratic internet that sometimes disturbs students in their online engagement and research. This negatively affects their online academic engagement.

5.1.3 Hypothesis Three: There is no Significant Relationship between the Quality of Student Accommodation Utilities and Students' Academic Engagement

The third hypothesis tested the relationship between the quality of student accommodation utilities and students' academic engagement at Ndejje University. The hypothesis was rejected as indicated by the study results. The study findings revealed that the quality of student accommodation utilities is crucial to the process of teaching and learning as it influences academic engagement of students. It was observed that the quality of student accommodation utilities is significant to students' engagement. According to Martinez and Rodriguez (2020), students can feel more connected to one another if they live in good accommodation with dependable utilities while according to Brown et al. (2022), poor quality utilities may cause students' stress levels to rise and interfere with their study habits. A bad experience in accommodation may impact negatively on a student's academics (Global Student Living, 2019). Therefore, availability and appropriate utilisation of student accommodation utilities had a greater influence to student's engagement.

In this study, the findings revealed that student's hostel/place of abode at Ndejje University were connected to sufficient electricity. Access to reliable electricity is critical for academic engagement. The UNDESA report (2019) indicated that having access to power helps the introduction of ICTs into the classroom, such as laptops and televisions, as well as the availability of lighting, allowing students to study for extended periods of time. This relates with Jonnes et al. (2018) that, these experiences improve students' learning abilities and foster a lifelong learning mind-set. If schools have electricity, classes for children and adults can be held even in the late hours due to enhanced lighting (Technical Consumer Products [TCP], 2017). This concurs with Hartmann (2018) who posited that electricity increases the quantity and quality of studying by allowing it to be done at various hours of the day by providing power and better lighting. Thus sufficient and reliable electricity supply allows

students to use electronic devices for research and communication. It also enhances student's ability to complete assignments and engage in virtual learning environments effectively which supports use of technology in education. This was true to learning experiences at Ndejje University with the use of 'nduels' for e-learning. Chong and Sin So (2021) proposed that universities should increase their use of the internet, especially the widespread use of e-books, as this might enhance students' academic engagement and intellectual stimulation which the researcher agrees with. However, power black-outs/insufficient power can lead to disruptions in learning for online lessons utilizing synchronous digital resources. So student housing developers need to prioritise electrical supplies and power backups like solar energy and generators that can provide light and power to students in the event of widespread power outages.

Student hostels at Ndejje University had functional and reliable source of safe and sufficient constant water for different activities. This agrees with the WASH Timor-Leste report (2016) that, a school with sufficient WASH services has a working and dependable infrastructure for supplying water enough for all students desires these include: hand-washing, drinking and toilet use. This helps to prevent waterborne infections or diseases associated with contact with excreta. Water is important for maintaining hygiene and overall health. With this good access, hygiene practices were observed in the hostels. Availability of water supports cleanliness of the accommodation facilities which reduces on the risk of water borne diseases and contributes to a conducive living environment for academics.

From the findings, the toilets at the hostels/places of abode were clean. A university should have enough private, secure restrooms for both students and instructors which are accessible, clean, and separate for males and females. According to Cahapay (2020), poor hygiene accounts for around 10% of the worldwide illness. Clean facilities promote a positive living environment that makes it possible for students to spend more time on campus and

engage in academics and extracurricular activities, it also helps prevent the spread of infections and illnesses, ensuring students remain healthy to focus on academics. When the toilets are in bad shape, a large proportion of students avoid using WASH facilities, which has negative effects on health, well-being, and cognitive function (UNESCO, 2019). Therefore clean environment enhances student satisfaction within their living conditions since sustaining a secure and hygienic accommodation facility is essential for the safety of students (Barret et al., 2019). However, poor sanitation can lead to health problems and discomfort which may affect students' ability to engage in academic activities.

Separate toilets for males and females are important for safety, privacy and comfort which all contribute to a conducive living environment. The toilets in the hostels were separate for males and females. The separation made students feel more secure and respected in their accommodation spaces which help to reduce stress and anxiety associated with gender insensitive facilities. When gender sensitivity is appreciated in the development of facilities, it promotes equity and inclusion within the university community. The separation can also alleviate concerns about safety and hygiene further encouraging positive living and motivation to engage in academic activities. Students agreed that the toilets at the hall/hostel have relatively enough stances. This prevents overcrowding and long wait times which can discourage students from using these essential services. Availability of enough stances helped in maintaining their hygiene without unnecessary delays vital for students' daily routines.

Some hostels/places of abode had functional and strategically located hand washing points. These promote hygiene and prevent the spread of communicable diseases in the communal living spaces. The ease of access to these points encouraged regular hand washing which is a key practice in maintaining student's health. Healthy students are less likely to miss classes, which enabled more consistent attendance of lectures and ultimately better academic engagement.

The hostels/places of abode which had a sickbay, the caretakers there managed students' sicknesses timely. This helped in addressing student health issues promptly and alleviated the added burden of unaddressed health issues which has a direct impact on academic engagement. The availability of onsite medical care ensures that students receive immediate attention for illnesses and quick referral in cases of major illness. This is based on the fact that healthy students are better learners (Tamika & Lisa, 2016). Effectively handling cases of illness reduces the time away from academic routines. It also alleviates the anxiety and stress related to health concerns since the students know that medical help is readily available when needed. Thus students can do better in school and reach higher levels of education if they are in better health (Santiago et al., 2015), and when they are physically fit, they participate actively in classroom activities and get greater academic results (Turcuator & Cahapay, 2020). More to this, functional sick bays can help in addressing mental health issues which are increasingly recognized as significant factors affecting performance through providing counseling services and mental health support.

Some of the hostels/places of abode had smoke detectors and fire extinguishers. Presence of functional fire alarms, extinguishers and clear evacuation routes ensured students safety which is very important for their peace of mind. A safe living environment allows students to focus on their studies without anxiety of potential hazards. Effective fire and safety measures demonstrate an institutions' commitment to student well-being which can increase students trust and satisfaction as they pursue the academic activities.

5.2 Study Conclusions

In light of the study findings, a number of conclusions were made;

5.2.1 Objective One: To establish the relationship between the proximity of student accommodation and students' academic engagement:

The study concluded that undergraduates residing in proximity to the university easily attend lectures punctually and consistently since the burdens of travel time and stress associated with commuting are mitigated. This boosts punctuality, preparedness for learning, engagement in more interactive variety for collaborative learning experiences as well as social integration. It also allows students to easily access the games and recreational facilities which enhance physical health, team work skills, time management, discipline and overall well-being which qualities are transferable to academic engagement.

5.2.2 Objective Two: To find out the relationship between the student accommodation facilities and students' academic engagement:

The study concluded that the aesthetic quality of the infrastructure of student residences positively impacts on their perception of the living environment. The visual appeal fosters a sense of appreciation and attachment which is linked to boosting student motivation and engagement. Spacious and well aerated reading spaces should be planned for in accommodation setup for students to engage in consistent and productive study habits. These are key to providing a balanced environment for students to transition between intense study sessions and relaxation. Outdoor study areas improve cognitive function, creativity while leisure spaces contribute to stress relief which promotes motivation and focus for academic engagement. Participating in sports and games builds self-assurance, self-control, teamwork and unity, which enhances both intra-personal and interpersonal skills among students. While regular physical activity is improves concentration, memory, time management, team work, discipline which skills are transferable to academic pursuits.

5.2.3 Objective Three: To examine the relationship between the quality of student accommodation utilities and students' academic engagement:

The study also concluded that reliable water supply supports cleanliness of the accommodation facilities which reduces on the risk of water borne diseases and contributes to a conducive living environment for academics. Clean facilities promote a positive living environment that makes it possible for undergraduate students to spend more time on campus and engage in academics and extracurricular activities due to minimal infections and illnesses. This enables undergraduates remain healthy focusing on academics.

5.3 Recommendations

The study would be vital to the policy makers, academia world, and the education sector:

1. It is critical that university administrators collaborate in order to guarantee each student's academic engagement. Universities should work closely with private business owners to offer more reasonably priced accommodation near to their campuses that is equipped with modern amenities.
2. Ndejje University and the private entrepreneurs in the business of accommodation should upgrade the amenities in the different halls and hostels to increase engagement of students. Things like cable internet connectivity, water, health and sanitation facilities as well as facilities for leisure and amusement need to be well planned for.
3. The Ministry of Education and Sports in conjunction with the National Council for Higher Education should develop and enforce the basic requirements and minimum standards for university accommodation and disseminate them to all universities in Uganda and ensure that they are implemented. This would improve on the accommodation for students in Universities especially if the hostel proprietors follow such standards.

5.4 Areas for Further Studies

- I. This study focused on student accommodation and student's engagement. Future research should investigate a similar study in a different university using various kinds of respondents other than students only. Future studies should think of including lecturers, owners of hostels, university administrators to obtain responses from a wider scope.
- II. Comparative analysis of On-Campus versus Off-Campus Accommodation is another area that can be taken on for further study. Comparison of the experiences and academic engagement of students living on-campus versus off-campus can highlight the benefits and drawbacks of different housing options, informing university policies on student housing.
- III. Exploring gender differences in accommodation preferences can also be taken on as an area for further research. Examining how gender influences accommodation preferences and academic engagement can reveal gender-specific challenges and opportunities, relevant in the development of targeted support measures.
- IV. Impact of living with family versus living independently when pursuing university education can be another area for further study. Examining the differences in academic engagement between students living with their families and those living independently can help understand the influence of family support versus independence on academic success.

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APPENDICES

APPENDIX I: QUESTIONNAIRE FOR UNIVERSITY UNDERGRADUATE STUDENTS

Dear respondent,

I am **JOHN BIRUNGI**, a student at Kyambogo University pursuing a Master's degree of Education in Policy, Planning and Management. I am conducting a study on; “**Student accommodation and academic engagement of undergraduate students at Ndejje University in central Uganda**” The information provided will be treated with utmost confidentiality and will be used strictly for academic purposes.

SECTION A: Demographic composition of respondents

Tick the most appropriate answer.

1. Gender

- a) Male b) Female

2. Age groups

- a) Below 20 years b) 21-24 years
c) 25-30 years d) Above 30 years

3. Faculty

- a) Social Sciences & Arts
b) Education
c) Science & Computing
d) Health Sciences

4. Year of study

- a) Year I
b) Year II
c) Year II
d) Year IV

5. Residence

- a) On Campus

b) Campus suburb

c) Far from Campus

SECTION B: STUDENT ACCOMODATION

Part I: The proximity of student accommodation

Instructions:

Use the following Likert scale to rate your appropriate response that is; 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Undecided (U) 4 = Agree (A) 5 = Strongly Agree (SA). Tick in the space provided in the table.

No.	Proximity	SD	D	U	A	SA
1.	I can easily reach at the university in time and attend lectures					
2.	I can easily participate in activities at the university even during odd hours because my hostel/place of abode is close					
3.	I can quickly access and use the computer labs and library at the university for study and research from my hostel/place of abode					
4.	I can use the games and sports facilities at the university any time of the day					
5.	I easily walk to and from the university to my hostel/place of abode					

Part II: The student accommodation facilities

Instructions:

Use the following Likert scale to rate your appropriate response that is; 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Undecided (U) 4 = Agree (A) 5 = Strongly Agree (SA). Tick in the space provided in the table.

No.	Accommodation environment	SD	D	U	A	SA
1.	The overall infrastructure of my hostel/place abode is beautiful					
2.	The reading space at my hostel/place of abode is spacious and well aerated					
3.	My hostel/place of abode has sufficient study space					
4.	My hostel/place of abode has open spaces for study and leisure					
5.	My hostel/place of abode has good games and sports facilities					
6.	My hostel/place of abode is very safe and my security is guaranteed					
7.	My hostel/place of abode has a common room for leisure and entertainment with a TV connected to DSTV					

Part III: The quality of student accommodation utilities

Instructions:

Use the following Likert scale to rate your appropriate response that is; 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Undecided (U) 4 = Agree (A) 5 = Strongly Agree (SA). Tick in the space provided in the table.

No.	Accommodation utilities	SD	D	U	A	SA
1.	My hostel/place of abode is connected to sufficient electricity					
2.	My hostel/place of abode has functional and reliable source of safe and sufficient constant water for different activities					
3.	The toilets at my hostel/place of abode are always clean					
4.	There are separate toilets for males and females at my hostel/place of abode					
5.	The toilets at my hostel/place of abode have enough stances					
6.	My hostel/place of abode has functional and strategically located hand washing points					
7.	The sickbay at my hostel/place of abode manages students sicknesses effectively					
8.	My hostel/place of abode has fire safety measures in place like smoke detectors and fire extinguishers					

SECTION C: STUDENT ACADEMIC ENGAGEMENT

Part I: Behavioural Engagement

Instructions:

Use the following Likert scale to rate your appropriate response that is; 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Undecided (U) 4 = Agree (A) 5 = Strongly Agree (SA). Tick in the space provided in the table.

No.	Behavioural engagement	SD	D	U	A	SA
1.	I try hard to do well in my university					
2.	I work as hard I can while on my studies					
3.	I pay attention during lectures					
4.	When I am in lectures, I fully participate in all activities					
5.	When I run into a difficult study problem, I keep working at it until I think I have solved it					
6.	I take an active role I extra-curricular activities in my university					
7.	I am an active participant of university activities such as sports gala					
8.	I volunteer to help with university activities such as sports gala					

Part II: Affective engagement

Instructions:

Use the following Likert scale to rate your appropriate response that is; 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Undecided (U) 4 = Agree (A) 5 = Strongly Agree (SA). Tick in the space provided in the table.

No.	Affective engagement	SD	D	U	A	SA
1.	Learning is interesting to me					
2.	I enjoy learning new things during lectures					
3.	I am very interested in learning					
4.	I like what I am learning at this university					
5.	I am happy to be at this university					
6.	I am proud to be at this university					
7.	I like my university					

Part III: Cognitive engagement

Instructions:

Use the following Likert scale to rate your appropriate response that is; 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Undecided (U) 4 = Agree (A) 5 = Strongly Agree (SA). Tick in the space provided in the table.

No.	Cognitive engagement	SD	D	U	A	SA
1.	When I study, I try to understand the material better by relating it to things I already know					
2.	When learning new information, I try to put these ideas in my own words					
3.	I make up my own examples to help me understand the important concepts I learn at university					
4.	When I study, I figure out how the information might be useful in the real world					
5.	When I study, I try to connect what I am learning with my own experiences					
6.	When I learn new things, I often try to associate them with what I learnt in other lectures about the same or similar things					

Part IV: Agentic Engagement

Instructions:

Use the following Likert scale to rate your appropriate response that is; 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Undecided (U) 4 = Agree (A) 5 = Strongly Agree (SA). Tick in the space provided in the table.

No.	Agentic engagement	SD	D	U	A	SA
1.	During lectures, I express my preferences and opinions					
2.	I adjust to whatever we are learning so I can learn as much as possible					
3.	I let my lectures know what I need and want					
4.	I let my lectures know what I am interested in					
5.	I try to make whatever we are learning interesting as possible					
6.	During lectures, I ask questions to help me learn					

APPENDIX II: SIMILARITY INDEX REPORT