AN ASSESSMENT OF BBA STUDENTS' PERSPECTIVES ON THE USEFULNESS OF MOODLE LEARNING MANAGEMENT SYSTEM AT ZCAS UNIVERSITY

By

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DECLARATION

I, Dubeka Buumba Muntanga, do hereby declare that this dissertation is my own work and that the works of others have been duly and appropriately acknowledged. I further declare that this dissertation has never been submitted to any institution for the award of any academic paper.

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Date:_____

CERTIFICATE OF APPROVAL

This dissertation of Buumba Muntanga Dubeka has been approved as partial fulfilment of the requirements for the award of degree of the Master of Library and Information Science by the University of Zambia.

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ABSTRACT

The study assessed students' perspectives on the usefulness of Modular Object-Oriented Dynamic Learning Environment (Moodle) at ZCAS University. The objectives were: to find out students' perspectives towards use of Moodle; assess students' usage of Moodle; identify students' perceived benefits of using Moodle; and establish challenges students faced in using Moodle at ZCAS University. Explanatory Sequential Design was used supported by both qualitative and quantitative approaches. Questionnaires and semi-structured interview guides were used for 307 study participants that comprised of students pursuing Bachelor of Business Administration from the first year to fourth year. All participants were purposively and randomly selected. Quantitative data was analyzed using SPSS and Excel. Qualitative data was analyzed thematically. The study found that majority students had intermediate ICT competence with few others identifying as experts. Students also perceived Moodle as a useful eLearning platform tool as it improved their access to academic information and resources. Students used Moodle because they had no choice since the lecturers posted their work on the platform. Findings also revealed challenges such as lack of proper orientation to students in the use of Moodle, delays or lack of feedback from some lecturers and lack of stable and reliable internet connectivity. The study concluded that students were generally ICT competent, and this helped them navigate and support peers on Moodle despite inadequate orientation on to use the platform. It was recommended that ZCAS University should adequately orient and train lecturers and students on the use of Moodle as an eLearning platform to help both parties navigate Moodle with ease, improve its feedback mechanism, invest in ICT infrastructure and add more exciting features that require little assistance to use on the Moodle portal.

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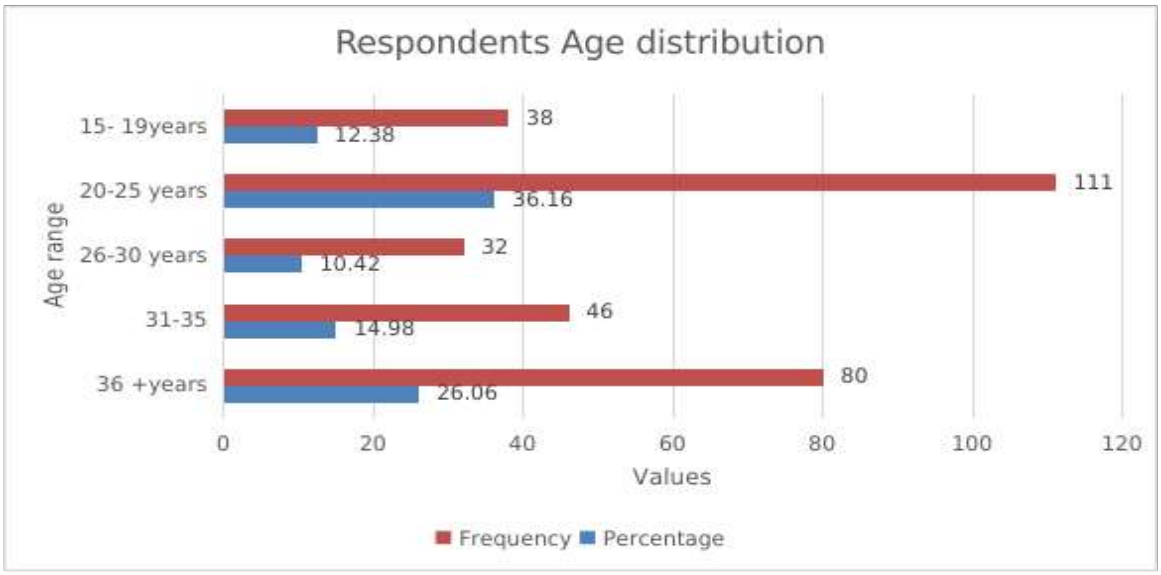

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LIST OF ABBREVIATIONS

AU	African Union
AFDBG	African Development Bank Group
BBA	Bachelor of Business Administration
CESA	Continental Education Strategy for Africa
GPL	General Public License
ICT	Information Communication Technology
LMS	Learning Management Systems
MOODLE	Modular Object-Oriented Dynamic Learning Environment
MKO	More Knowledgeable Others
OUT	Open University of Tanzania
SDG	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency

SI	Social Interaction
UK	United Kingdom
UM	University of Minho
USA	United States of America
UN	United Nations
UNDP	United Nations Development Program
USAID	United States Agency for International Development
WB	World Bank
ZCAS	Zambia Center for Accountancy Studies

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background of the study, statement of the problem, purpose of the study, the research objectives, questions, significance of the study, theoretical framework, delimitation and limitation of the study before providing operational definitions and a chapter summary.

1.1 Background

Education has become a center of progress and a guarantor for achievement of continental and global educational goals enshrined in the Sustainable Development Goals 2030 (SDGs) (United Nations, 2016), Continental Education Strategy for Africa (CESA) 2016-2025, and the African Union Agenda 2063 (African Union, 2024). For instance, Gicheru (2023) posited that education scientists and researchers have so far discovered innovative ways to contribute to quality teaching and learning in universities through integration of Information Communication Technology (ICT) in education. This is supported by Susiana and Ahmad (2021) who said that dynamic utilization of internet has shifted classroom pedagogies from conventional teaching and learning to virtual environments. Eman *et al.* (2018) believed that utilizing the internet facility, commonly known as e-Learning, is becoming a widespread trend in higher education institutions. Students can use digital media to interact with teachers and other students through email, discussion boards, and chat sessions.

Globally, higher education institutions have accepted e-learning due to its affordability and operational efficiency in Learning Management Systems (LMS). According to Ellis (2009) LMS are specialized platforms that provide educational content by digital means to help instructors to plan, implement and evaluate the learning process. Dougiamas and Taylor (2003) show that the evolution of LMS begun around 1924 when the first LMS known as the teaching machine was introduced. It looked like a typewriter and had windows which could administer questions, show questions and fill in answers (Dougiamas and Taylor,2003). It was followed by a problem cylinder invented by M. E. Lazerte around 1929. Further, an adaptive teaching system that automatically adjusts questions for learners based on their performance was invented in 1956.

The introduction of computers and internet technology in the latter half of the 20th century brought about the current idea of LMSs. Creation of software such as Programmed Logic for Automatic Teaching Operations(PLATO) by the University of Illinois transformed computer assisted interactions in the 1960s. Elements such as forums, message boards and file sharing were part of PLATO, and these are parts of the current LMSs(Hartley. 2001).

As the internet grew in popularity in the late 1990s and early 2000s, LMSs developed into all-inclusive digital platforms for managing, tracking, and delivering courses. Systems like Moodle, which Martin Dougiamas introduced in 2002, gained popularity due to its open-source framework which enables educational institutions to modify the platforms to suit their requirements (Dougiamas & Taylor, 2003).

MOODLE is an acronym for the Modular Object-Oriented Dynamic Learning Environment which is sometimes known as the virtual learning environment. It is a student-centered course management system essentially designed for educational institutions to deliver courses and learning material to students (Mwanaidi, 2022). Martin Dougiamas, the developer for Moodle was a postgraduate student at the Curtin University of Technology in Australia. He was a Webmaster of a university and a system administrator of WebCT installation. He started to develop Moodle to solve some problems with WebCT. The original version was targeted for small classes as a case study, but steadily many features were added by developers and other contributors from all over the world (Martin *et al.*, 2004; Dougiamas, 2004 and Koh, 2006). Developed in PHP, the Moodle is entirely free to use and is available under General Public License (GPL). It has features which allow course development, student enrollment, management of assignments, quizzes, grading and discussion forums for many virtual students at a time. This therefore reinforced the ability and stimulus of universities to scale up teaching and learning.

Evidence shows that e-learning is an upcoming approach in African higher education where Modular Object-Oriented Dynamic Learning Environment is among the e-learning tools. For example, a study by Eman *et al.* (2018) investigated the effect of Modular Object-Oriented Dynamic Learning Environment on undergraduate nursing students' and lecturers' attitudes at Mansoura University in Egypt. By using a quasi-experimental research design with a convenience sample of 286 nursing students and 30 nursing lecturers, the study found that undergraduate

nursing students and lecturers had positive attitudes toward Modular Object-Oriented Dynamic Learning Environment after utilization than before with statistically significant differences.

Qin *et al*. (2022) argued that a lot of learning management systems is on the increase offering a wide range of features which are sophisticated and accessible on the internet for use in teaching and learning, Solihin and Sari (2023) believe some learning management systems offer free or demo versions to give organizations an idea of their features. Empirical evidence has shown that every milestone in the history of learning management systems has been marked by a technological development that rapidly brought forth knowledge transfer as well as independent learning. The increase in technological advances brought about the introduction of many Learning Management Systems (LMSs) of which some are open-source products while others are commercial solutions. Moodle is an example of popular Learning Management Systems being used by thousands of organizations, businesses and universities worldwide (Qin *et al.,* 2022; Solihin and Sari, 2023).

According to Kim and Kim (2013) Moodle has been perceived as an addition to education quality based on the principles and theoretical perspectives of constructivism which places a learner as a participant and not a spectator in the process of learning. While using Moodle, learners are expected to be involved, active, leading to knowledge construction and change in knowledge, skills, values, attitudes and perceptions. Additionally, countries in Asia as well as some under the Gulf Cooperation, universities in the United Kingdom (UK), United States of America (USA) and Australia have increasingly adopted the use of LMS-Moodle platform into their operations (Reid, 2019; Gicheru, 2023; Solihin and Sari, 2023). This is all because Moodle e-learning platforms are visibly improving the quality of student learning.

Data shows that, most Sub-Saharan African institutions employ LMS-Moodle to enhance traditional in-person instruction, in which faculty members create and distribute online digital learning resources. In this instance, learning management systems (LMS) serve as an electronic repository for educational resources (Eman et al., 2018). To reach more students across different geographic borders, some institutions—particularly those that offer distance education—have started fusing traditional face-to-face delivery with learning management systems (LMS) (Andersson and Grönlund 2009).Considering these benefits, the adoption of LMS by higher education institutions in sub-Saharan Africa has been on the increase in recent years. Adkins (2013) predicted that between 2011 and 2016; LMS adoption would be at 15% per annum in

Africa. The increased adoption was further facilitated by the support of several international agencies such as the World Bank (WB), Swedish International Development Cooperation Agency (SIDA), United Nations Development Program (UNDP), African Development Bank Group (AfDB), and United States Agency for International Development (USAID) (African Union, 2024).

The Zambia Center for Accountancy Studies (ZCAS) was established in 1989 as a training institution specializing in accountancy, business finance courses as well as professional certification for qualifications like ACCA or ZICA and CIMA. This contributed to the production of a skilled professional force in the said fields. However, after recognizing the need for higher education beyond professional certifications, ZCAS expanded its mandate by establishing ZCAS University in 2011. Among the first programs to be offered by the university were Bachelor of Accounting and Finance, Bachelor of Computing and Information Technology, Bachelor of Business Administration and many others. As the University grew, the distance mode of education was incorporated to cater for students who could not attend traditional classrooms by offering flexible learning options. And so, Moodle was one of the initiatives in distance learning. However, after realizing its benefits, the platform was rolled out to all modes of learning at the university in 2016.

This shows that the learning management systems across the globe are becoming a modern-day popular classroom. Students and instructors in most higher education institutions where Moodle was adopted have appreciated its usefulness. Despite this innovation gaining moment in Zambia and at ZCAS University in particular, empirical data on students' perspectives on the usefulness of Moodle is scarce, it is against this background that the current study sought to investigate student's perspectives on the usefulness of Moodle at ZCAS University.

1.2. Statement of the Problem

Moodle was introduced in 2014 as a pilot project to support distance education at the Zambia Center for Accountancy Studies (ZCAS). In 2016, the programme was rolled out to full time, part time and distance students at the university. The rationale for this move was aimed at improving the quality of teaching and learning at this higher institution of learning. Studies by Hasan (2019)and Singh& Gokool(2018) looked at students' perceptions in terms of Features and usability as well as quiz assessment tools in an Isizulu language. However ,students' perspectives on usage,

benefits and challenges of usings Moodle in a country like Zambia and at ZCAS University have not been assessed. Hence, we do not know how students have perceived this facility to an extent of using it to their advantage in academic pursuit. Therefore, the study sought to assess students' perspectives on the usefulness of Moodle at ZCAS University.

1.3 Purpose of study

The purpose of this study was to assess students' perspectives on the usefulness of Moodle at ZCAS University.

1.4. Research Objectives

1. Determine students' perspectives towards the use of Moodle at ZCAS University.
2. Assess students' usage of Moodle ZCAS University.
3. Identify students' perceived benefits of Moodle ZCAS University
4. Establish challenges students faced in using Moodle at ZCAS University .

1.5. Research Questions

1. What are students' perspectives towards using Moodle at ZCAS University?
2. How do students use Moodle ZCAS University ?
3. What are the students' perceived benefits of using Moodle at ZCAS University ?
4. What are the challenges that students face in Moodle at ZCAS University ?

1.6 Research hypothesis

The following hypothesis guided the researcher in assessing student's perspectives on the usefulness of Moodle for BBA students at ZCAS university.

Hypothesis 1

Null Hypothesis (H_0): There is no significant difference in students' perspectives towards Moodle based on gender.

Alternative Hypothesis (H_1): There is a significant difference in students' perspectives towards Moodle based on gender.

Hypothesis 2

Null Hypothesis (H_0): There is no significant difference in Moodle usage patterns across different years of study.

Alternative Hypothesis (H_1): There is a significant difference in Moodle usage patterns across different years of study.

Hypothesis 3

Null Hypothesis (H_0): There is no significant difference in perceived benefits of Moodle across different age groups.

Alternative Hypothesis (H_1): There is a significant difference in perceived benefits of Moodle across different age groups.

Hypothesis 4

H_0 : There is no significant difference in the challenges faced by full-time, part-time, and distance learners when using Moodle.

H_1 : There is a significant difference in the challenges faced by full-time, part-time, and distance learners when using Moodle

1.7 Significance of the Study

Findings of this study may help ZCAS University to further integrate and incorporate Moodle as a teaching and learning tool to increase the participation of learners. It is hoped that the study may provide information on the management of Moodle and its implications on student enrolment and use. The study may serve as a form of monitoring and evaluation to be used to advise the University on future policy directions to improve operational efficiency. The study may also add to the existing body of knowledge on Moodle, its impact on educational outcomes, and programme evaluation. Findings may lead to the identification of new research avenues that may be carried out in future by interested researchers.

1.8 Delimitation of the Study

Kasonde-Ng'andu (2013:21) posited that "delimitation of the study is usually indicated to address how the study will be narrowed in scope." This study was limited to students at ZCAS University.

ZCAS University was ideal delimitation for this study as it has adopted Moodle as its primary Learning Management System (LMS), aligning with its strategic focus on digital learning and technology-driven education.

1.9. Limitation of the Study

The findings of the study may be restricted for generalization to the ZCAS University community, private and public institutions of higher learning due to differences in culture and socio-economic status as the study was conducted at ZCAS University with only Bachelor of Business Administration students.

1.10. Theoretical Framework

1.10.1 Vygotsky's 1934 Social Constructivist Theory

Vygotsky (1962) proposed a social constructivist learning theory which alluded that language and culture were the frameworks through which humans experience, communicate, and understand reality. From his theory, social constructivism is the view that learning occurs through social interaction and the help of others (Powel and Kalina, 2009). This is to say that learning concepts are transmitted by means of language, interpreted and understood by experience and social interactions within a cultural setting (Akpan *et al.,* 2020). Since it takes a group of people to have language and culture to construct cognitive structures, knowledge therefore is not only socially constructed but co-constructed (Powel and Kalina, 2009). The social constructivist, according to Vygotsky (1968) sees knowledge as what learners do in collaboration with teachers, peers and technology.

Thus, Akpan *et al*. (2020) opined that social constructivism recognizes the social aspect of learning and the use of conversation, interaction with others, and the application of knowledge as an essential aspect of learning and a means to achieving learning objectives. Without assistance Vygotsky believes students can continue to be unsuccessful in an activity, but with meaningful direction from parents, teachers and technology can succeed. Thus, through both formal and informal conversations and education, adults convey to children the way their culture interprets and responds to the world. To explain this better Vygotsky came up with major themes which formed his assumptions: Social Interaction (SI), and More Knowledgeable Others (MKO)

a) **Social interaction**: According to Vygotsky social interactions play a fundamental role in the process of cognitive development. He believed that the development of memory, attention and reasoning involves learning to use the inventions of society such as language, mathematical systems and memory strategies. Thus, cognitive skills are mediated by words, language and forms of discourse which serve as psychological tools for facilitating and transforming mental activity. This theme is important to the current study because it places students' perspectives on the use of Moodle at the centre of interaction in the e-learning classroom. It is envisioned that Moodle strategy cannot work without fostering an environment for interaction.

b) **More Knowledgeable Others:** According to Vygotsky**,** this theme refers to anyone who has a better understanding or a higher ability level than the learner with respect to a particular task, concept or process. The MKO is usually thought of as being a teacher, coach or older adult, although MKO could also refer to a child's peers or a younger person who may be the individuals with more knowledge or experience, the MKO can also be a computer. The key to MKOs is that they must have more knowledge about the topic being learned than the learner does. Moodle is placed within this premium as learners cannot do without guidance; this implies that anything of significance should be used to help learners acquire skills, knowledge and information.

Vygotsky's Social Constructivist Theory may provide the following advantages to the current study.

i) Moodle as an e-learning platform facilitating learning and guiding learners rather than being directive and moulding of learning.

ii) The platform of using more of learner centred methods of teaching such as Groupwork, Question and Answer, and Discussion to promote interaction among learners.

iii) Instructors and learners using technology and different interfaces to enhance communication

1.11. Operational Definitions of Terms

According to Chishimba (2015), concepts can be defined conceptually or operationally. This is in line with Bless and Craig (1995), who defended the concept-defining process by stating that it

enables the description of circumstances in a way that is relevant to the study... Therefore, the study had the following operational definitions:

Perspective: To perceive is to simply receive information about and make sense of the world around us. In this study it will mean students' way of viewing Moodle (an LMS) in its overall operation process.

Usefulness: To be useful is to basically be of service, good effect or advantageous and of service. It also implies being practical, producing material results and supplying common needs. And so, usefulness in this study will be seen as the ability to be successful and produce intended results. It can also be referred to as the capability of producing the desired result or the ability to produce desired output.

Perceived Usefulness: Perceived usefulness is the degree to which the user believes that a specific technology will increase his or her performance in the learning process just like the Moodle.

Learning Management System: A Learning Management System (LMS) is a specialized platform that provides educational content by digital means.

Moodle: is an acronym for Modular Object-Oriented Dynamic Learning Environment which is a virtual learning environment

1.12. Summary

This chapter introduced the study by providing the background, problem statement, purpose, objectives, research questions, significance, theoretical framework, and scope. It highlighted the increasing role of e-learning in higher education; particularly the use of Moodle as a Learning Management System (LMS) to enhance teaching and learning. Despite its adoption at ZCAS University since 2014, there is limited empirical data on students' perspectives regarding its usefulness. The study aimed to assess students' views on Moodle, their usage, perceived benefits, and challenges faced. Grounded in Vygotsky's Social Constructivist Theory, the research emphasized the importance of social interaction and guidance in learning. Findings may inform policy decisions on Moodle's integration and management while contributing to existing knowledge on LMS adoption in higher education.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter reviews literature related to the study students' perspectives on the usefulness of Moodle at ZCAS University. It starts with LMSs in higher learning institutions and moves to the adoption of LMSs in Southern Africa. It will then proceed to look at studies relating to students' perspectives towards the use of Moodle, students' usage of Moodle, students' perceived benefits of Moodle and challenges faced in using Moodle.

2.1 Learning Management Systems in Higher Learning Institutions

Education in the 21st century shifted focus to electronics as a new fashion for conducting teaching and learning business whereas, traditional classrooms were facing a remarkable transformation due to the growing prominence of Learning Management Systems (LMS) (Mwanaidi, 2022). Teaching staff in Institutions develop digital content which is shared online as a way of supplementing the traditional face to face instruction. In this case, LMSs are used as a medium of storage and sharing such content.(Vovides *et al.* 2007). Other institutions particularly those providing distance education, have blended face to face with online learning to reach more students across a broad spectrum(Andersson and Grönlund 2009). Research by Gicheru (2023) has confirmed that the impact of LMS in education is irrefutable in providing smart and efficient ways for institutions to deliver personalized content and foster greater engagement among students. Data has shown that, through LMS, educators can customize learning materials, embrace diverse teaching models, and create an interactive learning environment that captivates students' interest.

Research has indicated that the use of LMSs and academic performance of students enrolled on LMSs based courses are related. For example, a study by Filippidi, Tselios and Komis (2010) looked at students' performance at a university in Greece and found that using a LMS improved academic performance, accounting for 26.2% of the variation in overall grade. Further, Jo, Kim and Yoon(2014) also discovered that the frequency of LMS use was stronger predictor of students' performance in courses delivered via the LMS And so, this shows that increased LMS usage increases levels of students' satisfaction with courses and ultimate performance. Similarly,

Tarigan (2011), points that contented students are less likely to complain and may enrol in additional classes (Booker & Rebman, 2005). Palmer and Holt (2009) assert that the quality of learning outcomes is positively correlated with pleasure.

It is not enough to merely state that increased use will result in greater advantages. Delone and Mclean (2003), argue that the nature, appropriateness, and quality of LMS use are significant outcomes, and tracking how much time students spend on the system is insufficient. And so. students must utilize practically every facet of the system to appreciate the anticipated benefits. For example, Jo, Kim, and Yoon (2014) discovered that students who consistently used the LMS's features and logged in from the start of a programme to the finish performed higher academically than those who did not. Another study by Filippidi et al. (2010) found that students who made greater use of LMS elements like assignments, forums, questionnaires, and glossaries performed better academically. According to Mödritscher, Andergasse and Nuemann(2013), students who took courses via LMS at the Institute of Information Systems and New Media, Vienna University of Economics and Business, performed better academically when they spent a lot of days and viewed a lot of topics. Therefore, assessing the intensity and quality of use of these systems can be used to measure the success of LMS in the area.

Studie have revealed a rise in the implementation of LMSs in Sub Saharan African institutions of higher education. For example, the five institutions(in Sub Saharan Africa) surveyed by Ssekakubo, Suleman and Marsden(2011) has implemented some type LMSs. In addition, Munguatosha, Munyinda and Lubega(2011) also found that 80% of institutions they surveyed were utilizing LMSs. Furthermore, other studies have shown that institutions have implemented LMSs across nations like Sudan(Elmahadi & Osman 2013), Uganda (Mayoka and Kyeyune, 2012), Zimbabwe (Chitanana et al. 2008) and Mozambique (Unwin et al. 2010).

Although LMS adoption has increased in the area, actual utilisation is said to be low. Similar circumstances existed in several institutions in Sudan, Mozambique, and Zimbabwe (Dube& Scott 2014). For example, at Zimbabwe's National University of Science and Technology, only 20% of trained users were the utilizing LMS. Low LMS utilization has also been seen in four prestigious universities in Zimbabwe (Chitanana et al. 2008) as well as other places like Maseno University in Kenya, Mondlane University in Mozambique (Unwin et al. 2010), and the University of Zambia (Ssekakubo et al. 2011). Despite Moodle being implemented on full scale to full time, part time

and distance students at ZCAS, the current study endeavors to assess student use of Moodle at ZCAS measuring intensity, frequency and quality.

Out of the institutions mentioned, even those who are characterized as active and experienced users, only utilize a tiny percentage of the LMS functionalities (Unwin et al. 2010). According to research, LMS communication facilities like chat, email, and discussion forums were not being used to their full potential (Vovides et al. 2007). For example, Bhalusesa et al. (2013), indicated that just 8% of users at Open University of Tanzania used the LMS's communication facilities. Additionally, it was discovered that just 28% of users were participating in University of South Africa LMS conversations (Venter et al. 2012).

Furthermore, learning management systems (LMS) come with features that can display the course materials in a variety of multimedia formats, including animations, videos, and audio. Faculty members typically underuse these technologies, according to studies (Vovides et al. 2007). Most of the professors at the National University of Science and Technology of Zimbabwe have been utilising LMS solely as a method for transmitting course information, which makes this clear (Dube & Scott 2014). Like any other electronic repository, instructors post course materials in text format for students to download. Similar circumstances were noted at the University of Dar es Salaam in Tanzania, where thirty faculty members who claimed to be using LMS merely uploaded files and content. (South Africa Institute of Distance Education 2013).

Heeks (2002) noted that many information systems set up in emerging nations frequently experience partial or complete failure. After receiving training, users typically do not use LMSs in many sub-Saharan African institutions. At the National University of Science and Technology of Zimbabwe, for example, barely 20% of the more than 10,000 users who received training to utilize the LMS remained active users (Dube & Scott 2014). This circumstance was nearly identical in numerous institutions throughout the area.

Open-source learning management systems have been adopted by numerous institutions in sub-Saharan Africa (Unwin et al. 2010). However, usability issues plague a lot of open-source technologies (Nichols & Twidale, 2003). For instance, research comparing the usability of Moodle, Sakai, and dotLRN, Martin et al. (2008) discovered that no LMS achieved 80% compliance of usability heuristics. In a similar vein, research that assessed Moodle's usability at FON University in Macedonia discovered that it has 75 usability issues (Kakasevski et al, 2008).

Additionally, the authors discovered that 80% of the students experienced serious issues with online chat and discussion forum functions. Because African colleges have been adopting these systems without carrying out usability tests, it is unclear whether the LMS is useable by students at those institutions (Ssekakubo et al. 2011).).

2.2 Adoption of Learning Management Systems in Southern Africa

The adoption of LMSs across Southern Africa arose around 2010 due to an increase in demand for flexible learning models, coupled with the expansion of internet accessibility. South Africa, benefiting from its advanced technological infrastructure, emerged as a leader in the implementation of cloud-based LMS in higher education institutions, subsequently influencing other countries in the region to follow suit.

The growing preference for open-source platforms, such as Moodle, can be attributed to their adaptability, allowing institutions to tailor these systems to address specific local educational needs (Shaame, El Nabahany, Yunus, Kondo, & Maro, 2023). Additionally, recognizing the necessity of extending educational access to remote areas, several universities in Southern Africa incorporated mobile learning strategies. These initiatives leveraged affordable mobile devices and data connectivity to facilitate student engagement in geographically distant locations (Kunda et al., 2018).

During the 2010s, the integration of Learning Management Systems (LMS) into the curriculum gained momentum in Zambia, driven by the country's increasing focus on digital literacy and the expansion of the higher education sector. In response, the Zambian government invested in infrastructure to support online learning through initiatives such as the Zambia e-Learning Initiative (2010). However, challenges such as frequent power outages, limited internet connectivity, and a shortage of skilled personnel hindered the effective implementation of these systems (Ghirardini et al., 2011).

To improve access to learning resources for both on-campus and Open, Distance, and e-Learning (ODeL) students, private universities such as ZCAS University, Cavendish University, and Zambia Catholic University began adopting LMS platforms such as Moodle and Google Classroom (Chawinga & Zozie, 2016). These initiatives aimed to enhance the delivery of educational content and facilitate interactive learning experiences within the Zambian higher

education landscape. Further, the COVID-19 pandemic significantly accelerated the adoption of Learning Management Systems (LMS) across Zambia, prompting numerous universities to transition to online learning during the lockdown period. For example, ZCAS University swiftly adapted its Open, Distance, and e-Learning (ODeL) programs by utilizing platforms such as Moodle, Microsoft Teams, and Zoom for virtual lectures and assessments (Kunda et al., 2018).

2.3 Students Perspective towards the use of Moodle

Understanding students' perspectives is important because it provides insight into usability and effectiveness of platforms like Moodle, thereby allowing institutions to modify digital infrastructure to suit students' needs. In addition, it can help to develop support systems and programs that in turn enhance engagement and learning outcomes. Further, considering student feedback ensures that the technological implementations align with educational objectives thereby fostering a more inclusive and successful learning environment.

Recent studies have explored students' views on Moodle by pointing out both its benefits and challenges. For example, Mtakyawa and Benele(2024) conducted a study at Tanzania College of Business Education and found that students perceived the integration of Moodle as beneficial noting enhancements in quality of teaching and learning. Another study by Ithindi (2022) looked at the use of Moodle in teaching English Language at the Namibian University of Science and technology. It was deduced that while efforts were made to utilize Moodle, there was still need for enhanced interactions with its features so as to better develop students' English language skills.

In a study to determine the effectiveness of using Moodle-based e-learning to increase student learning outcomes in the introductory material of accounting at Andalas University, Susiana and Ahmad (2021) recruited students of the second semester of economics faculty. Data was collected using a questionnaire sent to students who were still active in college and who were taking introductory accounting. The results of the analysis show that the material given by the lecturer before the use of Moodle shows a significant effect of 35.6% on student understanding, whereas after using Moodle it is found to have an effect of 20%. This shows that students' comprehension was higher before using Moodle than it was after. Based on the study's findings, it can be said that using Moodle-based e-learning for introductory accounting was less successful in increasing student comprehension. Nevertheless, the study did agree that using Moodle could enhance

learning strategies and material enrichment, but not introductory accounting learning comprehension. This finding is peculiar and unique to many studies that have reported benefits in the use of Moodle as a learning platform. Considering that ZCAS offers accounts would be excruciating whether the use of Moodle as a learning platform for full time, part time and distance students' have benefited the student populace.

Another study by Segura et.al (2024) at the Higher Education Technological Institute of Spain analysed students' digital competences while considering their attitudes, knowledge and use of ICT. The findings indicated that as students' progress in their academic journey, their familiarity and proficiency with ICT tools including platforms like Moodle may increase. This therefore indicates that a student's level of study may have a bearing on ICT competence and ultimate use/ perception of Moodle.

Similarly, students' perceptions of Moodle were assessed at a rural university in Zimbabwe. Using a descriptive and explanatory design, the study collected data via an online questionnaire from 300 randomly sampled undergraduate students. The findings indicated that about 61% of the participants had good computer skills while 24% had excellent skills. This suggests that ICT competence influences the students' perceptions and utilization of Moodle for learning experiences (Maphosa, 2024).

In as far as orientation/training on using Moodle is concerned, a study was conducted by Mtakyawa and Benele (2024). A case study design was used with a random sample size of 374 respondents. While the study found that integrating Moodle into the learning process enhanced the overall quality of teaching and learning; it also recommended for the development of policies that promote effective technology use in education including guidelines/trainings for implementing Moodle in blended learning environments to ensure equitable access to all students. This underscores the importance of trainings to ensure that all Moodle users are conversant with the platform for maximum returns.

2.4 Students' Usage of Moodle

Costa (2012) examined the Moodle platform's features and tools and how students used them at the University of Aveiro (UA), Portugal. Information was gathered using content analysis, a questionnaire sent to 278 students, and one unstructured interview with the UA Moodle

accountable officer. The findings demonstrated that although Moodle has a lot of potential, its primary function is that of a material repository. Nonetheless, students understand how crucial it is to utilize this platform's other features to support the effectiveness of the teaching and learning process. Noting the foregoing, it is indeed the wish of the researcher to find out whether students at ZCAS find Moodle to be beyond a repository system and what extent that acts as a facilitating condition to use Moodle.

In a different study conducted in Saudi Arabia, Mahwesh (2014) investigated how the Communication Module, Assignment Module, Course Content Module, and Course Delivery Module of Moodle encourage students to use e-learning environments. It involved students who use Moodle for online learning and made use of quantitative empirical research. 276 online students were used to test the hypothesis. The study's findings showed that students view using online communication tools to interact with teachers and other students to be beneficial. For them, submitting assignments online and checking grades was a simple process. The resources and content posted on the e-Learning portal were educational, and it was helpful to be able to access them independently. The study concluded that students' motivation to use the e-learning system was significantly predicted by these Moodle features. The current study will analyze the features which motivate the students to use Moodle LMS. In as much as the features of Moodle that motivated students to utilize the platform for academic efficiency were known, it could be considered that, perhaps Saudi Arabia had advanced in the usage of Moodle, or it was compulsory in the sampled institution. However, the study did not highlight that perspective. In the case of the current study, it hopes to establish nature of facilitating conditions that necessitates use or non-use of Moodle at ZCAS.

Umek et al. (2015) conducted a study to determine the relationship between learning and motivating elements in higher education. It was found that various forms of interactions between students and instructors are a predictor of student motivation in e-learning. Students' enthusiasm to use the system is demonstrated by their active participation in various forms of communication activities, such as active participation in discussion forums and ongoing interaction with teachers (Valho, 2011). According to earlier studies, students say that the introduction of many motivational activities in the course, such as quizzes, chat sessions, and discussion forums, is the reason they interact with the system frequently. The course's activities encourage students to stay connected to the system to continue learning (Cole, 2000). Sharing information encourages students to keep

using the modules to collect more data. A learning portal is continuously used since it offers the chance to acquire higher-quality knowledge (Kim & Kim, 2013).However, whether the aforesaid aspects are enough to motivate a student to use Moodle were yet to be verified as variables in the study at ZCAS University.

2.5 Students' perceived benefits of Moodle

It is important to understand students' perceptions on the benefits of Moodle as they can influence learning outcomes, improve user experience and support digital inclusivity. Recent studies have explored the students' perceptions of benefits of Moodle in various educational setups. For example, a study by Mtakyawa & Banele (2024) at the College of Business Education in Tanzania found that blended learning through Moodle improved their understanding of course materials, facilitated access to information and helped in completing academic tasks.

Maphosa (2024) conducted a study at a university in rural Zimbabwe and found that students saw Moodle as a platform supportive of authentic learning. They asserted that Moodle has a positive effect on their acquisition of knowledge and skills necessary relevant to real life tasks and challenges thereby enhancing their effectiveness in understanding and completing academic tasks. Further, Arifin, et al (2023), conducted research at an Indonesian university. According to the research findings, the students' interviews showed a largely positive opinion of Moodle as a learning management system, with a greater propensity for active engagement in the educational process. Some students stated that they are unable to use Moodle because of server faults and network problems. Additionally, it was found that Moodle provided advantages including easy access to educational resources and the capacity for students to efficiently manage their time.

In addition, a study conducted at the University of Zambia revealed that although faculty acceptance of Moodle was originally modest, lecturers were willing to take part in programs to learn how to use the platform. This implies that ICT-savvy people play a critical role in helping those who struggle with Moodle, which in turn encourages assignment management and submission (Chewe, 2018).

2.6 Challenges in the Implementation of Moodle as a Learning Management System

A faculty online learning community was examined by Price et al. (2021) as a means of assisting faculty in implementing a guided-inquiry curriculum. They contend that effective LMS

implementations rely not only on offering instructors assistance and training, but also on the degree of student and instructor satisfaction with the LMS in use. Therefore, it is essential to include the user's point of view while evaluating the success of LMS implementation. Therefore, investigating factors affecting students' behavioral intentions towards using Moodle is a significant step into ultimately appreciating or not appreciating the entire Moodle platform in the e-learning space.

Heraclion (2012) gives a scenario in which Moodle platform for conducting e-learning would at most be a worst of time when not properly handled. According to him, a lab presenter must be physically there to offer direction and ensure that students are working hard. Regretfully, teachers don't always have enough time to monitor how each student's work develops. Theoretically, personal student work accounts for over 40% of the entire working time for each unit. There is a 40% loss in the development of the instruction unit since all activities are carried out without consideration for the individual student work. Additionally, there is a significant waste of time due to the absence of teaching resources and materials like video projectors, textbooks, slides, or even photocopies. Oral dictation is necessary for the teaching duty to provide the students with as much formal information and detail as possible. On average, one-third of the lecture time is spent on the dictation phase. Thus, this period, along with the TPE time, represents a significant waste of time for both the teacher and the pupils that could have been used to engage in more activities. Consequently, not only are there not enough teachers, each one of them spends incredibly unproductive amounts of time lecturing. And so, beyond not making the most of their working hours, students feel that the training is insufficient, upsetting, and they don't get any feedback on the activities they ultimately accomplish outside of class. Heraclion (2012) was giving this instance from a developing country point of view. The current study endeavors to establish challenges students faced in using Moodle at ZCAS University.

Another significant study to appreciate in accordance with challenges students face in utilizing Moodle is one done by CarValho (2011) in Portugal. Carvalho premised a study on Students' perceptions of Blackboard and Moodle in a Portuguese university. The University of Minho (UM) was the target sample because it was the first university in Portugal to use Blackboard as its official learning management system. UM also uses Moodle in a variety of projects, which makes comparisons intriguing. Prior research comparing Moodle and Blackboard had only examined students' impressions and was restricted to small sample sizes. In his research, Carvalho attempted to connect those views to how LMSs affect students' involvement levels. Carvalho presented the

findings of a study on students' opinions and experiences with both Blackboard and Moodle to evaluate the breadth and depth of use of the two LMSs. In contrast to earlier research, over 20% of students said they had no choice, but more students (46.5%) said they liked Blackboard over Moodle and 34.7% said they chose Moodle. With a percentage (46.5%) of students indicating having preference for blackboard use as compared to Moodle use by the 34.7% of students, surely, this could be considered an instance of a factor that affects students' behavioral intentions towards using Moodle. However, technology is ultimately welcomed differently in different spaces and time thereby affecting utilization in one space might not exist as equal to another space. This will be another likely instance the current study is yet to confirm or disconfirm in relation to factors affecting students' behavioral intentions towards using Moodle at ZCAS University.

Students' non-participation in the learning process plays an important role in high dropout rates in online learning (Dagger & Wade, 2004). It is therefore very important to determine which approaches might increase student engagement (Tyler-Smith, 2006). However, there are many factors investigated by different researchers and aggregated into cumulative indicators that influence students' performance towards Moodle, such as learner characteristics (demographic factors, prior e-learning experience, ability and interest motivation, self-regulation), supporting systems (Islam et.al., 2011); (Farrokhnia et. al 2025); (organizational aspects. For example, structure and institutional arrangements; people aspects, include motivation, training, other stakeholders (Bo Cheng, 2012) and e-learning system (quality of contents, tasks (instructor factors), technology such as system reliability, user interface). Despite these factors being found out through empirical means, the current study finds it necessary to use them as baseline findings into verifying with factors that might have a unique orientation against the under listed from ZCAS Univerasity. Zambian situational factors might not be generalized to be like those already reported. It can be argued that establishing challenges of Moodle as LMS is the beginning of putting up corrective measures that might bring about operational efficiency and make the program relevant and user friendly to students.

Islam (2015) did a literature review of studies about Moodle and focused on the challenges associated with Moodle use after realizing that many studies focused on benefits. He noted that researchers have put much emphasis on its benefits but not much is discussed on the disadvantages of e-learning technology. The five challenges included: Learning Style and Cultural Challenges, Pedagogical E-learning Challenges, Technological Challenges, Technical Training Challenges and

Time Management Challenge. In the context of academics, students were also an aggregate sum to this identity, and this spoke to the current study which among its objectives is to assess students' usage of Moodle for learning at ZCAS.

One problem affecting most African countries was internet connectivity whereas higher education institutions were either connected to slow internet or no internet at all was available. Therefore, accessibility of good innovations like Moodle becomes problematic to users even after good intentions for installation. Mwanaidi (2022) investigated challenges in using Moodle by postgraduate students and the teaching staff for accessing education materials at Open University of Tanzania (OUT). After employing cross-sectional research through purposive, convenience and snowball sampling techniques; findings indicated that both postgraduate students and faculty faced similar hardships in using Moodle such as no internet access, low bandwidth and incapabilities to purchase internet bundle by end users. This means that there was an urgent need to address internet challenges if higher institutions were to maximise benefits that Moodle offered to clients. To do that provision of sufficient training in general on the use of Moodle and supported by infrastructure to ensure reliable access to Moodle was a must investment of higher education everywhere was to contribute to social economic growth of African countries, Zambia inclusive.

2.7 Literature Gap

The existing literature indicates Moodle's growing popularity as a Learning Management System (LMS) in higher education, however there is a paucity of study focusing on students' experiences at ZCAS University. Although studies concentrate on Moodle implementation, they don't go into detail about how often, how intensely, and how well ZCAS students use it. Furthermore, research indicates that Moodle is largely utilized as a repository for content, but little is known about the barriers to fully utilizing its interactive elements, such forums and quizzes. It is also challenging to contextualize Moodle's influence at ZCAS due to a lack of comparison research evaluating its efficacy across various Zambian universities. In addition, there has been no research looking at how students' ICT competence influences their Moodle experience at ZCAS University. Also, the challenges like faculty support, internet access and training remain underexplored within the University's distinct learning environment. Lastly, although previous research has linked LMS use to students' academic performance, there is no empirical evidence that indicates Moodle's direct influence on ZCAS University students' grades thereby allowing for further research

2.8 Summary

This chapter reviewed literature in themes on students' perspectives on the usefulness of Moodle at ZCAS. It highlighted that Learning Management Systems (LMS), such as Moodle, have altered higher education by improving content delivery and student engagement; however, their adoption in sub-Saharan Africa is still low, with most institutions employing them solely as content repositories. Different students have varying opinions about Moodle; some find its interactive elements useful, while others find it difficult because of their low level of engagement and ICT competence. Despite its benefits, which include better access to learning materials and support for blended learning, Moodle's usefulness is hindered by issues including inadequate internet connectivity, a lack of faculty training, and restrictive institutional policies. Research has indicated that Moodle is frequently underutilized beyond providing access to fundamental content, and its uptake is influenced by elements including motivation, interactions with instructors, and institutional support. Despite its increasing popularity, nothing is known about how Moodle directly affects ZCAS University students' academic performance or about comparative studies evaluating its efficacy among Zambian universities. By highlighting these gaps in the literature, this study lays the groundwork for future studies on Moodle's contribution to improving learning outcomes at ZCAS.

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter presents the methods that were used to carry out the study on students' perspectives on the usefulness of Moodle at ZCAS. It introduces and describes the following: research design, pilot study, target population, sample size, sampling methods, validity and reliability of instruments, data collection procedures, methods of data analysis and ethical issues.

3.1 Research Design

Orodho (2003) defines a research design as the scheme, outline or plan that is used to generate answers to research problems. It constitutes the blueprint for the collection, measurement and analysis of data. This was a case study which adopted Explanatory Sequential Design. Creswell (2018) posits that an explanatory sequential design involves gathering and examining quantitative data then gathering and examining qualitative data to clarify or expand upon the quantitative findings. This design enabled the researcher to make use of the survey to first ascertain broad trends then move to qualitative interviews to further delve into students' perspectives.

This gave a thorough understanding of how BBA students used Moodle as well as the advantages and difficulties encountered. The sequential explanatory structure enabled the qualitative structure to confirm, build on or reveal qualitative findings thereby enhancing the study's overall vigor(Saunders, Lewis& Thornhill, 2019). In addition, this design enhanced methodological triangulation which improved validity and credibility of the results. Furthermore, it helped in reducing the drawbacks of utilizing a single research methodology by employing a mixed methods approach(Bryman, 2016).

3.2 Research Site

The research site of the study was in Lusaka at ZCAS University. ZCAS University was chosen because it had a well-established Moodle platform. unlike other higher learning institutions which were still transitioning with LMSs. This made it a suitable case for studying real world application, use and engagement in an institution where online learning was already a structured component of academic delivery. Further, ZCAS University demonstrated commitment to integrating technology as evidenced by its focus on digital transformation thereby providing a basis for assessing students' perspectives on effectiveness of Moodle in their studies.

3.3 Target Population

Target population has been defined by Komb and Tromp (2006), as a set of cases, objects or events of interest to the researcher; from which a sample is drawn and to which the research findings would be generalizable. The population for this study comprised of a total of 3,500 undergraduate students ZCAS University as they were all using Moodle. These study participants were perceived to be reliable in giving information on student perspectives on the usefulness of Moodle.

3.4 Sampling Method

Sampling is a process of selecting participants, events, behaviors or elements for participating in a study (Gray, Grove and Sutherland, 2016). The study used simple random sampling techniques to select students studying Bachelor of Business Administration (BBA). During the time this study was being conducted, ZCAS University was offering twenty-eight (28) undergraduate programs. A simple random technique was appropriate because it provided all programs with an equal and unbiased chance of inclusion in the study. All the names of 28 undergraduate programmes were written on separate pieces of paper and these papers were put in a box and a raffle was conducted to draw out one program where participants would be drawn. This thereby ensured a data-driven process, by avoiding subjective decisions (Creswell & Creswell, 2018). And so, by adhering to probability sampling principles, this strategy minimized bias and improved the validity and reliability of the research (Kumar, 2022). Furthermore, the target population consisted of all undergraduate students, who share homogenous characteristics by virtue of being undergraduates. As a result, the findings of the study can generalize to the entire population.

3.5 Sample size

A sample according to White (2005) and Kothari (2011) is a subset or group of subjects selected from the larger population and whose characteristics can be generalised to the entire population. The sample size for this study comprised of 307 students pursuing Bachelor of Business Administration in first, second, third and fourth year at ZCAS University. This was drawn from a total of 938 students pursuing Bachelor of Business administration. According to Krejcie and Morgan's (1970) sample size determination table, for a population of approximately 900, a sample of around 269 is recommended, making 307 a sufficiently large and statistically valid sample. Additionally, using Cochran's formula for sample size calculation with a 95% confidence level and a 5% margin of error, a sample size close to 300 is often adequate for generalizability (Cochran, 1977).Further, the sample size minimized sampling error while balancing feasibility in data collection and analysis, ensuring that the results were reflective of the entire student body (Saunders, Lewis, & Thornhill, 2019). Further, the BBA students included first to fourth year hence the varying demographic and academic diversity. And so, the responses could mirror the trends across the whole student body.

3.6 Validity of instruments of the study

According to Krishna (1993), Validity may be defined as the ability of a scale or tool to measure what it is supposed to measure. It can also be defined as the accuracy and truth of the data and findings that are produced. Validity has to do with the effectiveness (or successes) of an instrument in measuring the specific property it intends to measure(Nalaila and Nsabila, 2013). To ensure validity of instruments, a pilot study was conducted at the University of Zambia using twenty (20) participants to test the instruments. This allowed the researcher to assess whether the instrument was correctly capturing the intended information and to make necessary amendments to enhance its validity.

3.7 Reliability of instruments of the study

Reliability looks at the consistency and dependability of the findings. Nalaila and Nsabila (2013) note that while validity focuses on the accuracy of measurement, reliability is concerned with the consistency of results. In this study, ensuring reliability was a key step to ensure that the findings were consistent and could be replicated. By conducting a pilot study and reviewing the responses

from the questionnaire and interview guide, the researcher was able to make adjustments that improved both the validity and reliability of the instruments. This process was essential for ensuring that the research results would be both accurate and consistent.

3.8 Research Instruments

3.8.1 Questionnaire

Kasonde-Ng'andu (2013) commented that the use of an online questionnaire is good as information could be collected from a large sample as it also upholds confidentiality and saves time. The study used a questionnaire(Appendix B) that was composed of two main sections: the participants' demographic information and the questionnaire elements that addressed research objectives. To assess students' perspectives of the benefits and challenges of using Moodle, a 5-point Likert scale was employed, ranging from 1 (strongly disagree) to 5 (strongly agree).

3.8.2. Semi-Structured Interview Guide

Semi-structured interviews with open ended questions were conducted to obtain a deeper understanding of students' perspectives regarding their use of Moodle in the learning process. Creswell (2009) noted that the use of interviews in social research was important as most problems may not be easily understood by statistical methods, but by qualitative analysis. The interviews allowed the researcher to ask follow-up questions, and hence, got well-detailed clarifications. The interview guide was used on one-to-one interaction with thirty (30) students from the larger sample of three hundred seven (307). A sample size of 30 was sufficient in this case study as it allowed for in-depth exploration of individual experiences while ensuring saturation (Cresswell, 2014). Further, Marshall, Cardon, Poddar and Fontenot (2013) argue that in a case study, qualitative interviews are often effective with sizes of about 10%nof total sample. And so, the researcher felt that a sample of 30 interview participants was sufficient to achieve qualitative insights minus overwhelming the scope pf the study. It also allowed study participants to share their views on the usage, benefits and challenges.

3.9 Data Analysis Techniques

Data was collected through a questionnaire administered during tutorials and a semi-structured interview. In the empirical study, a total of 307 valid responses were gathered between June and July 2023. The quantitative data collected was analyzed using the Statistical Package for the Social

Sciences (SPSS). Further, 30 out of 307 students participated in the semi structured interviews. Qualitative research principles support the selection of 30 students for semi-structured interviews, guaranteeing data saturation and practical viability. While Creswell and Poth (2018) contend that 20 to 30 participants are enough for phenomenological investigations, Guest, Bunce, and Johnson (2006) state that saturation usually happens within 12 to 30 interviews, making 30 a balanced choice for depth, diversity, and manageability. The qualitative responses from the interviews were transcribed, coded, and categorized to identify recurring patterns and themes, which provided deeper insights into the study's findings.

3.10 Ethical Consideration

The researcher strictly took note of all ethical issues involved in the research process starting from data collection to data reporting stages. Other than seeking permission from UNZA and ZCAS University, the researcher sought informed consent from the actual study participants. All details of the research were explained in full to the study participants, including the fact that they could choose not to participate if they felt uncomfortable for inclusion. Further, the researcher observed confidentiality during the study and did not intend to name any targeted student.

3.11 Summary

This chapter outlines the methodology used to examine ZCAS University students' perspectives on the usefulness of Moodle. It adopted an Explanatory Sequential Design, beginning with quantitative data collection and analysis, followed by qualitative methods to deepen understanding and ensure triangulation. The study targeted 3,500 undergraduate students, using simple random sampling to select 307 Bachelor of Business Administration students, based on Krejcie and Morgan's table and Cochran's formula for statistical validity.

A pilot study with 20 students from the University of Zambia helped refine and validate the research tools, enhancing reliability. Data collection involved a questionnaire (using a 5-point Likert scale) and semi-structured interviews with 30 students, ensuring data saturation. Quantitative data was analyzed using SPSS, while qualitative data was coded and thematically analyzed.

Ethical approval was obtained from both institutions, and informed consent ensured participant confidentiality and voluntary involvement. The methodology ensured credible, reliable, and generalizable findings across the undergraduate population at ZCAS University.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 Overview

This chapter presents the findings of the study which sought to assess students' perspectives on the usefulness of Moodle at ZCAS University.

4.1 Demographics Characteristics of the Participants

4.1.1 Age Distribution Range of Participants

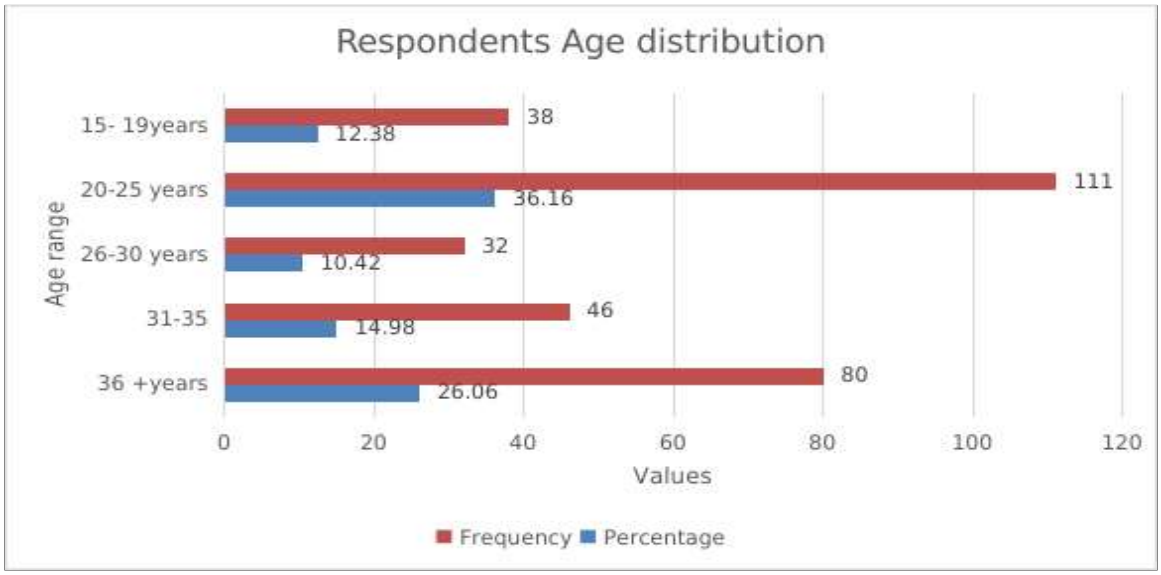

Figure 1: Age Distribution Range

Figure 1 shows that the study had a total of 307 participants of which 40% were female and 60% were male. In terms of the age distribution 36 participants aged between 15-19 representing 12.38%; 111 participants aged between 20-25-years representing 36.16%; 32 participants aged between 26-30 years representing 10.42%; 46 participants aged 31-35 representing 14.98% and 80 participants aged 36 and above representing 26.06% informed the study results. The age group between 20-25 constitutes more than a third of the sample, which may indicate that the study is likely to reflect the perspectives and behaviors of younger adults. However, a significant proportion of participants (26.06%) are aged 36 and above, representing a sizable portion of the

study population. This indicates that the study was not limited to younger participants, providing a well-rounded perspective from both younger and older individuals.

4.1.2 Mode and Year of Study

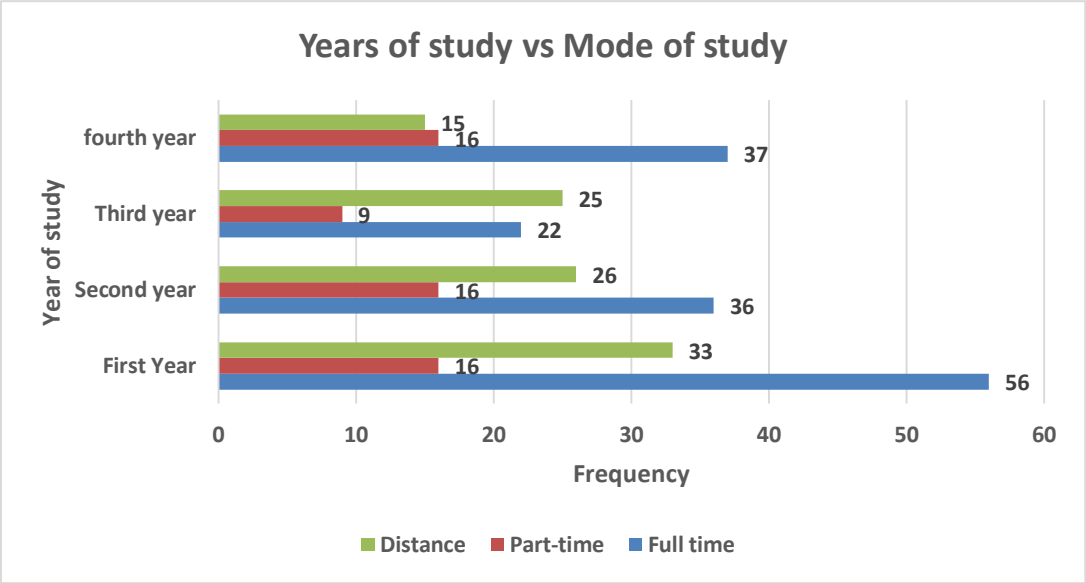

Figure 2: Distribution of Mode and Year of study

Figure 2 shows the mode and year of study of the participants. Data shows that first-year full-time students were 56 representing 18.24%; second-year full-time students 36 representing 11.73%; third-year full time students 22 representing 7.17%; fourth-year full time were 37 representing 12.05%; distance students were 99 representing 32.25% and part time students were 57 representing 18.57%. All these students were pursuing Bachelor of Business Administration (BBA)**.** This distribution was preferred to collect balance coverage of views on the usefulness of Moodle as a learning management system.

4.2 Students' perspectives towards the use of Moodle at ZCAS University

Participants were asked to state whether Moodle was useful. A questionnaire and interview guide were used to solicit their perspectives on the usefulness of Moodle and majority of participants agreed that Moodle was useful in coursework.

In agreeing that Moodle was useful in their coursework, participant 25 had this to say:

"*Moodle is a game-changer for me… I can access the course content anytime, which is so helpful, especially when I need to revisit certain topics for better understanding. I also like the discussion*

forums where I can interact with my classmates and clarify things that I don't fully grasp during class. It has made my coursework more interactive and engaging."

Figure 3 below gives an illustration of the responses from the questionnaire.

4.2.1 ICT Competence

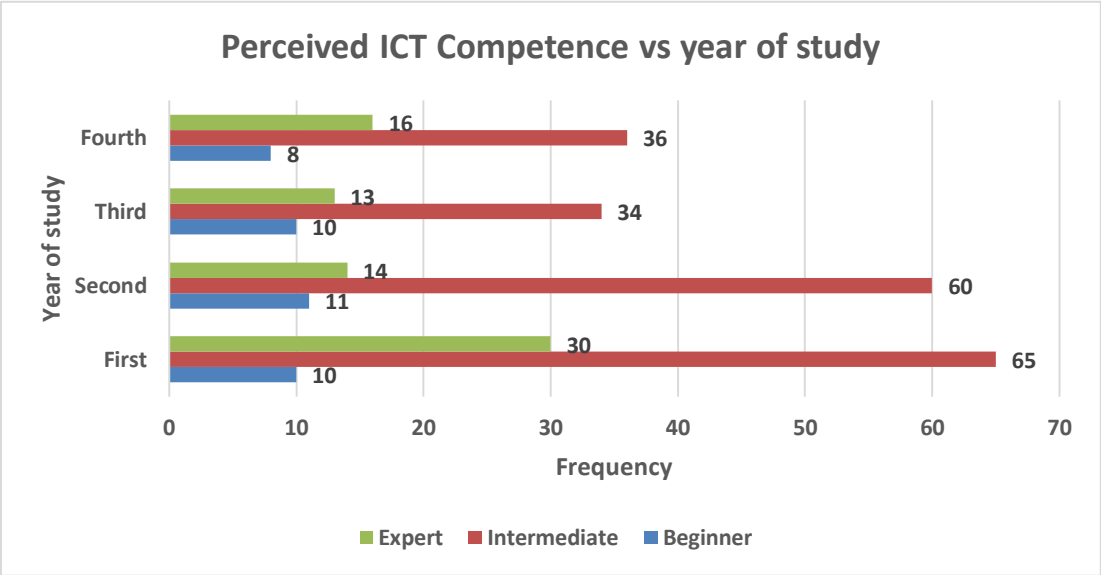

Figure 3: Perceived ICT Competence and the Year of Study at ZCAS

Figure 3 shows participants rating of their perceived ICT competence and the year of study at ZCAS. The findings indicates that majority 195 representing 63.5% of the study participants said that they had intermediate ICT competence; 73 representing 23.8% of study participants rated themselves as having an expert level of ICT competence. 39 representing 12.7% of the participants had indicated that they had a beginner level of ICT competence. Generally, results showed that students were computer literate with the first-year students showing higher levels of ICT competence. This therefore suggests that while ICT competence is generally strong among students, there is no clear trend of increasing expertise with academic progression. Table 1 below provides a cross tabulation of findings.

Year of study	Beginner	Intermediate	Expert	Total
First	10	65	30	**105**
Second	11	60	14	**85**
Third	10	34	13	**57**
Fourth	8	36	16	**60**
Total	**39**	**195**	**73**	**307**

Table 1: ICT Competence vs year of study

4.2.2 Moodle Orientation

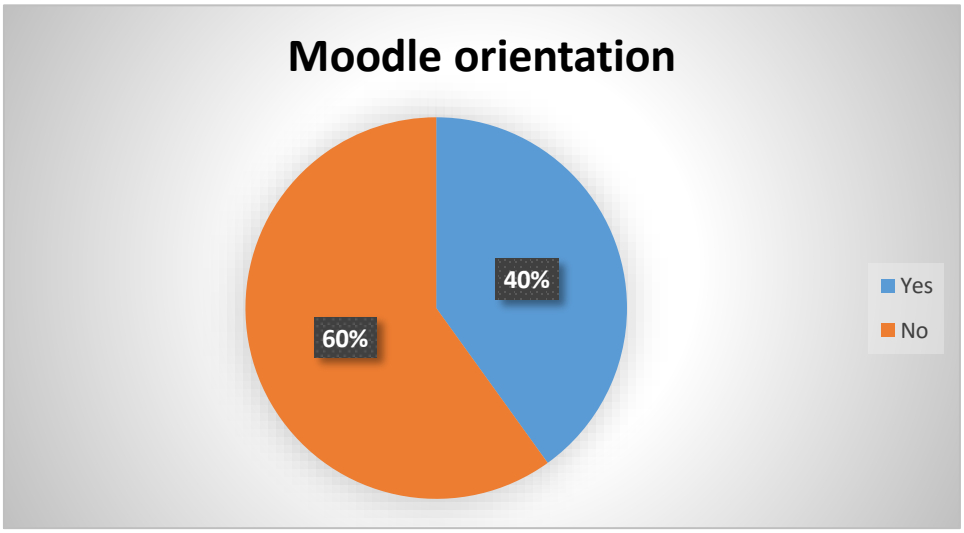

Figure 4: Orientation or Training in Moodle Platform

When asked whether the respondents had received orientation or training on use of the Moodle platform, the study found that 40% of the students at ZCAS had received orientation or training about the use of the Moodle platform for their course work-related activities. 60% of the study population sample was not oriented towards use of Moodle.

4.2.3 Improved Ability in Navigation Due to Orientation

The participants were asked to indicate whether orientation improved the ability to use the Moodle platform. The responses showed that 114 representing 37% of the study participants indicated that

the orientation or training had improved their ability to efficiently use Moodle eLearning platform while the rest indicated that it had not. Further, participants who indicated that they had not received orientation on the use of the Moodle platform were further asked to indicate how they became familiar with usage of the Moodle platform. Majority indicated that they are self-taught while the others (63%) pointed that they were taught by colleagues. The figure below highlights the findings.

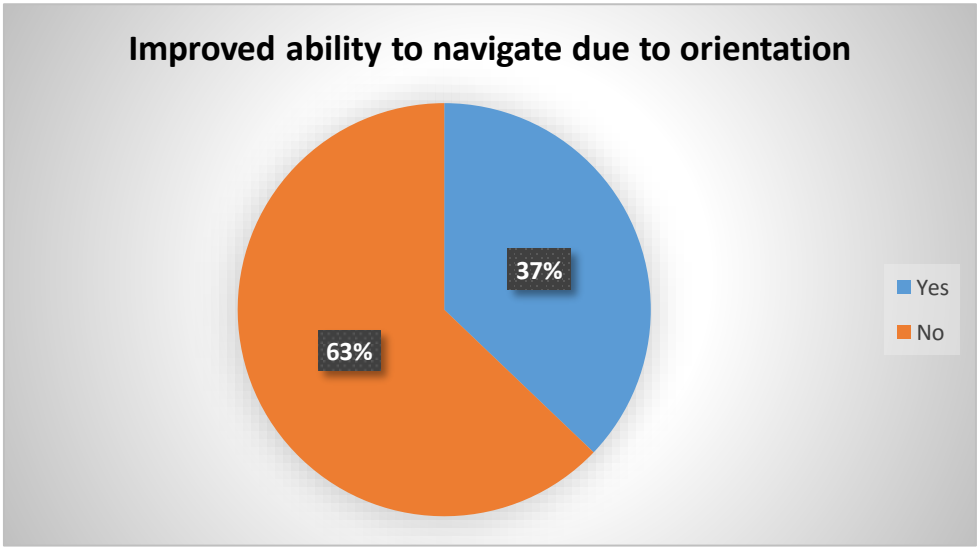

Figure 5: Improved ability to use navigation tools on eLearning platform due to orientation

4.3 Students use Moodle at ZCAS University

Students were asked on the motivation and usage of Moodle using a questionnaire and an interview guide.

4.3.1 Motivation for using the Moodle Platform

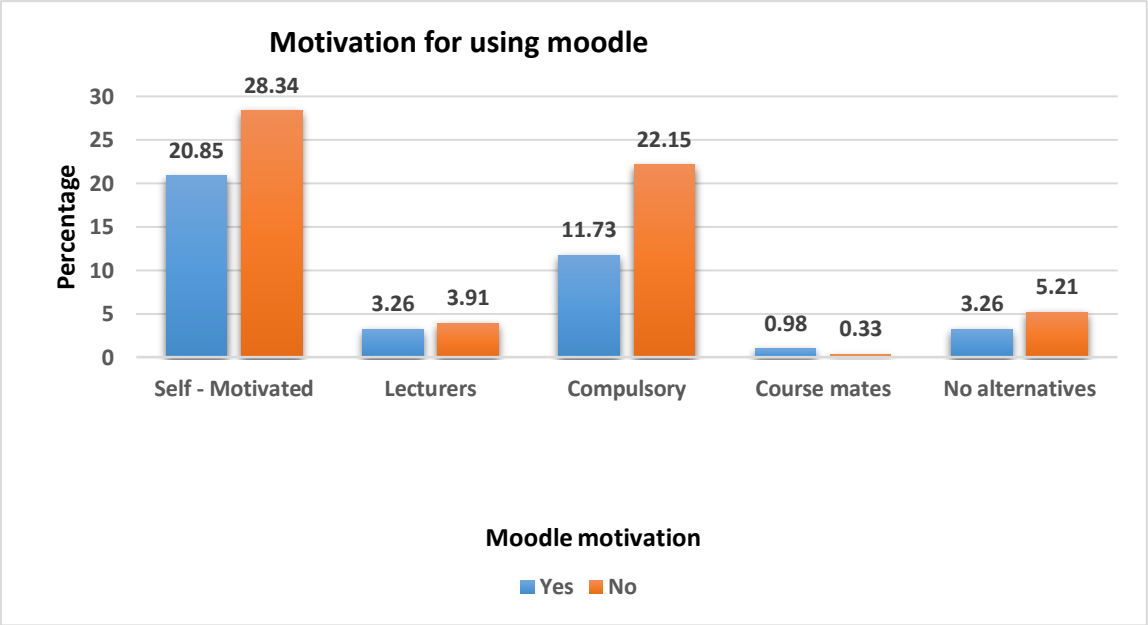

Figure 6: Orientation and motivation to use Moodle

Figure 6 shows that 20.85% of the students who received orientation indicated that they were self-motivated in their use of the eLearning platform while 28.34% of those who said that they did not receive any orientation in the use of the Moodle platform also indicated that they were self – motivated in the use of the Moodle platform. The study also found that, students use the Moodle platform mainly because they had no choice. It was either the lecturers post their work on the platform, therefore the students must use it to access the work, or that it is compulsory for all the students to use the eLearning platform or that there is no alternative to the Moodle platform. Less than 1% of the participants indicated that they were motivated by fellow course mates in the use of Moodle at ZCAS.

Participant 50 further indicated that:

'*At first, I used Moodle just because it was compulsory, but I've come to appreciate how it helps me stay organized with deadlines and coursework submissions hence the motivation'*

Other sentiments from students were that Moodle made learning more interactive via discussions and it was flexible due to availability of coursework and recorded class sessions on the portal. For instance, participant 41 also stated that:

"I am motivated to use Moodle because I can access lecture notes anytime and even review recorded sessions at my own pace, which is a huge advantage when preparing for exams.".

4.3.2 Students' perspectives on the ease of using Moodle and Years spent using Moodle

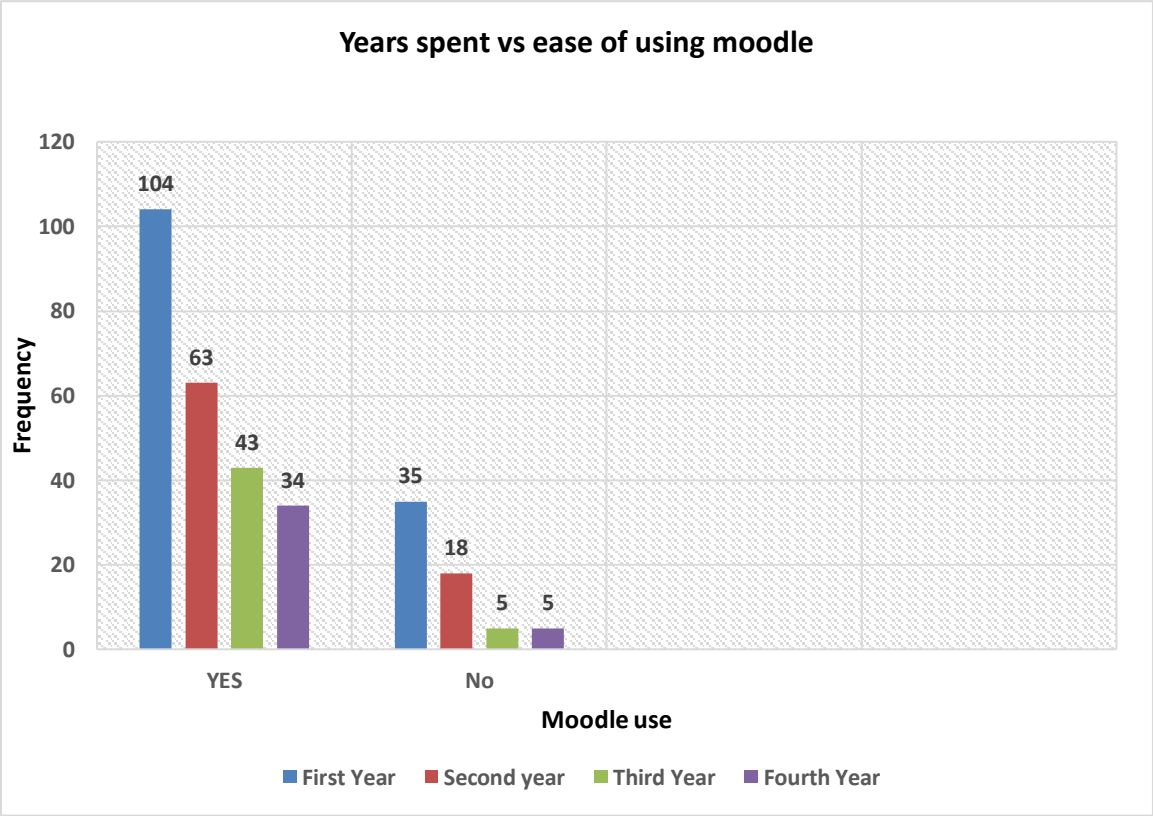

Figure 7: Students' perspectives on the ease of using Moodle and Years spent using Moodle

Figure 7 shows that 45.6% of the study participants had spent only 1 year using Moodle. A further 26.4 % of the students had spent at least two years using the Moodle platform for their academic work. In addition, 15.3% and 12.8% of the participants had spent 3 years and 4 years respectively using the Moodle platform. Data shows that when asked to state whether the students found the eLearning platform easy to use, 79.5% of the respondents had agreed. It also shows that 34.2 per cent, 20.52%, 13.7%, 11.1% of the first year, second year, third years and fourth-year students respectively found the use of the Moodle platform to be easy.

4.3.3 Students' perspectives on Moodle Modules

The study sought students' perspectives on information clarity, ease of navigation of the Moodle database, organization activity for Lessons and use of the delivery activity tool of the Moodle platform.

4.3.3.1 Information clarity and Portal Navigation

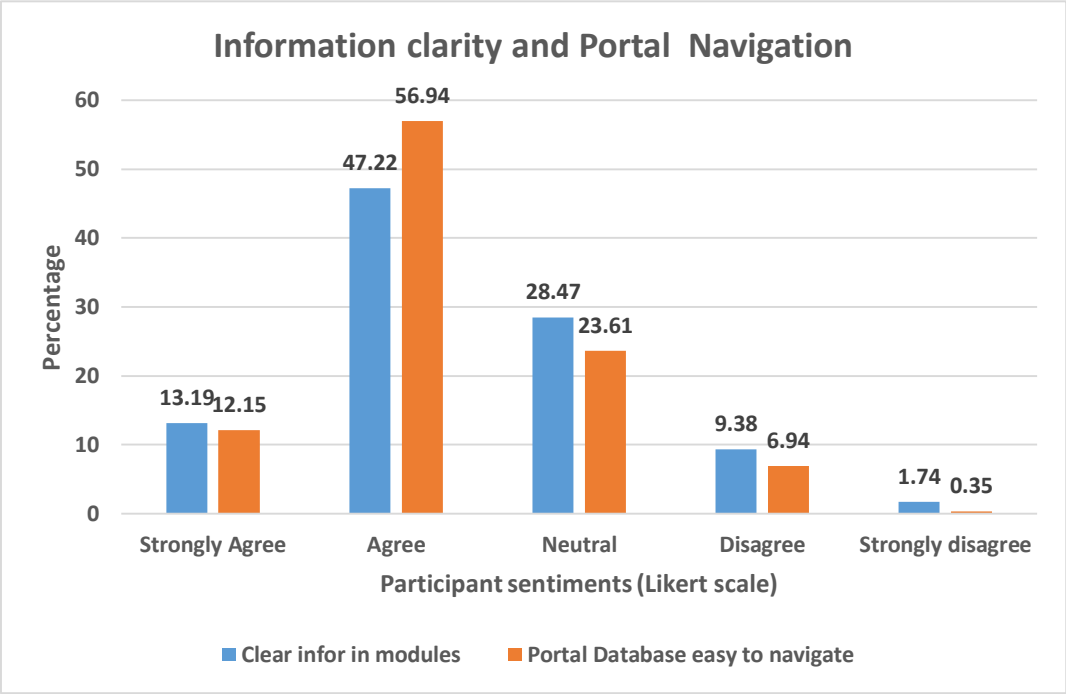

Figure 8 Information clarity and Portal Navigation

The study participants were asked on whether they felt that information in the course modules was clear and understandable, 60% of the participants agreed with the statement. 28.5% of the participants were not sure about whether the information organisation on the Moodle platform was clear and easily understandable. 69.1% of the study participants felt that the portal was clear and easily navigable.

4.3.3.2 Functionality of the 'collaboration activity tool

Table 2: Functionality of the collaboration activity tool

The eLearning Portal's 'Collaboration' activity tool in stocking definition terms and simplified concepts is very rich in serving its intended purpose of being a glossary and wiki	**Number of respondents**	**Percentage**
Strongly Agree	16	5.21
Agree	94	30.56
Neutral	155	50.69
Disagree	31	10.07
Strongly Disagree	11	3.47
Total	307	100

Table 2 shows 50% of study participants neither agreed nor disagreed whether the functionality of the 'collaboration activity tool' in stocking definition terms and simplified concepts is rich in serving its intended purpose of being a glossary and wiki. It was also found that 35.8% of the participants had agreed to the statement. 13.5% of the respondents collectively disagreed with the statement.

4.3.*3.3* Organization of activities and the use of Delivery' activity tool in Moodle

The respondents were also asked to rate the organisation activity that Moodle provides as well as how well the respondents use the 'delivery' activity tool in Moodle. The findings show that only 38% of the respondents indicated that the organisation of the activities on the Moodle platform was exceptional or very well organised. 28.6% of the respondents felt that the organisation of activities in the Moodle was either rarely or never organised. The study also found that 37% of the respondents indicated that they did not properly use the 'delivery activity' tool in Moodle – they rarely or never used the tool. Only 28% of the respondents said that they were able to properly use the 'delivery' activity tool in Moodle.

4.4 Students' perceived benefits of using modular object-oriented dynamic learning environment at ZCAS University

4.4.1 E-Learning Portal Improves Students' Access to Information on Academic Work

Table 3: student responses on eLearning portal improving access to information

eLearning portal improves students' access to information on academic work	Frequency	Percentage
Strongly Agree	83	27.03
Agree	147	48
Neutral	68	21.88
Strongly disagree	6	2.08
Disagree	3	1.04
Total	307	100

The students were asked whether they felt that the e-Learning portal at ZCAS improved their ability to access the information they need for academic work. Table 2 shows that 230 representing 75% of the participants improved access to information. Furthermore, 9 representing 3% of the participants felt that their access to the e-Learning portal did not improve their access to academic information at ZCAS.

4.4.2 E-learning portal enhances students' effectiveness in understanding and completing academic tasks

Table 4: e-portal enhances students' effectiveness in understanding and completing academic tasks

The portal enhances students' effectiveness in understanding and completing academic tasks	**Frequency**	**Percentage**
Strongly Agree	51	16.61
Agree	131	42.67
Neutral	92	29.96
Strongly Disagree	26	8.46
Disagree	7	2.28
Total	307	100

Table 4 shows that 181 representing 59% of the study participants felt that access to the eLearning portal did enhance their effectiveness in understanding and completing academic tasks. 92 representing 30% of the study participants were not sure whether or not their access to information through the eLearning portal enhanced their effectiveness in understanding and completing academic tasks. 33 representing 10.7% of the study participants felt that their access to the e-Learning portal at ZCAS did not enhance their effectiveness in understanding and completing academic tasks.

4.4.3 Students who were good with Moodle were very helpful to those who found it challenging

Table 5: Students who were good with Moodle were very helpful to those who find it challenging

Students who are good with Moodle are very helpful to those who find it challenging	Frequency	Percentage
Strongly Agree	49	15.97
Agree	125	41.04
Neutral	98	31.92
Strongly disagree	26	8.47
Disagree	8	2.60
Total	307	100

When asked whether the student who were good at navigating the Moodle portal were very helpful to their colleagues who had challenges in navigating the eLearning platform, 175 representing 57 % of the study participants felt that the students were very helpful to their colleagues facing challenges with the eLearning portal. 98 representing 32% of the study participants were not sure whether the students who were good with Moodle, understanding the eLearning portal available at ZCAS were helpful to fellow students who had difficulties navigating the eLearning platform. Furthermore, the study found that 34 representing 11% of the students felt that the students that were good at navigating the Moodle platform were not helpful to students that were not using the eLearning portal.

4.4.4 Help rendered by fellow students to use Moodle makes it easier to use Moodle

Table 6: Help rendered by fellow students to use Moodle makes it easier to use Moodle

Help rendered by fellow students to use Moodle makes it easier to use Moodle	Frequency	Percentage
Strongly Agree	38	12.5
Agree	117	38.19
Neutral	113	36.81
Strongly Disagree	27	8.68
Disagree	12	3.82
Total	307	100

As a follow-up, the study further asked the participants whether the help rendered by fellow students on the use of Moodle made it easier to use Moodle. 155 representing 50.69% of the participants had indicated that the help they received did in-fact make it easier for them to navigate the Moodle platform at ZCAS. 113 participants representing 36.8% were not sure whether the help they received had any effect on their ability to use the Moodle platform. 39 study participants representing 12% believed that the help received did not affect their ability to use the Moodle platform.

4.4.5 Benefits of Moodle Submitted Through Interview Guide

After conducting an interview with some students, the following responses were

common:

- Moodle helped to provide quality teaching and learning experiences.
- Moodle promoted positive attitudes in students.
- Moodle helped to reach to more students at the same time.
- Moodle helped to improve student performance in courses.
- Students were satisfied of the programme leading to taking more courses.
- Moodle helped management and submission of students' assignments.
- Quizzes, discussion forums, chit chats and emails helped to improve students' digital literacy

For example, participant 150 said that:

> *"Uh you see the world was fast changing in terms of technology, we cannot deny that technology has brought more benefits than harm. In my view the Moodle learning platform at ZCAS is a good academic tool that helps to improve quality of teaching and learning. Universities globally are using eLearning platforms as a sign of development and imparting high tech skills to its recipients. We cannot afford to lag in Zambia. Therefore, I feel this technology is good and must be embraced by all. It just makes students life easier. Just imagine you are in kaputa, and you need to submit an assignment …you can simply do it in the comfort of your home."*

4.5 Challenges that students faced in using Moodle at ZCAS University

Students being beneficiaries of Moodle mentioned several challenges. The following were responses from students:

- *Participant 29 pointed that Moodle was a good programme, but students were not properly oriented on how to use Moodle this disadvantaged student active engagement of Moodle*
- Another student (Participant 60) said that*: using Moodle is okay but delayed feedback or sometimes lack of feedback from lecturers was problematic at this institution*
- *On the same challenges, Participant 10 further stated that: one of the major challenges is lack of internet, some of us come from rural areas which has poor network. This makes usage of Moodle insignificant.*

4.6 Inferential statistics

Hypothesis 1

Null Hypothesis (H_0): There is no significant difference in students' perspectives towards Moodle based on gender.

Alternative Hypothesis (H_1): There is a significant difference in students' perspectives towards Moodle based on gender.

The purpose of the hypothesis was to ascertain whether gender significantly affects how students view Moodle. Since the Shapiro-Wilk test revealed that the data was not normally distributed ($W(307) = 0.77$, $p < 0.001$), indicating a significant departure from normality, a Mann-Whitney U test was employed. The difference between the randomly chosen values from the gender and Moodle access to information populations was statistically significant, according to the Mann-Whitney U test ($U = 31{,}789.5$, $Z = -7.6545$, $p = 1.954e\text{-}14$). The null hypothesis was disproved because the p-value was less than 0.05, indicating that there is a statistically significant gender difference in the opinions that students have about Moodle.

Hypothesis 2:

> *Null Hypothesis (H_0): There is no significant difference in Moodle usage patterns across different years of study.*
>
> *Alternative Hypothesis (H_1): There is a significant difference in Moodle usage patterns across different years of study.*

The hypothesis aimed to determine whether there is a significant difference in Moodle usage patterns across different years of study. A Kruskal-Wallis test was used because the Shapiro-Wilk test indicated that the data was not normally distributed, $W(307) = 0.73$, $p < 0.001$, confirming the need for a non-parametric test. The Kruskal-Wallis test results revealed significant differences in Moodle usage patterns across the four years of study for all the measured variables: clarity of course modules, ease of navigating the database module, organization of activities, delivery of activities, collaboration activities, and the utilization of Moodle activities such as quizzes.

The results of the Kruskal-Wallis test for course module clarity showed a statistically significant difference ($\chi^2(3) = 16.89$, $p = 0.001$). In comparison to first-year students (mean rank = 143.45), second-year students (mean rank = 131.05), and third-year students (mean rank = 166.01), fourth-year students (mean rank = 179.88) reported higher levels of clarity. Regarding the ease of navigating the database module, the test yielded $\chi^2(3) = 27.73$, $p < 0.001$, which is statistically significant. The mean ranks indicated that fourth-year students (mean rank = 193.32) found it easier to navigate the database compared to first year (mean rank = 157.24), second-year (mean rank = 130.09), and third-year students (mean rank = 142.66).

The organization of activities showed the most pronounced difference, with $\chi^2(3) = 80.25$, $p < 0.001$. Fourth-year students (mean rank = 198.08) reported significantly better organization of activities than first year (mean rank = 123.39), second-year (mean rank = 111.12), and third-year students (mean rank = 190.6). In terms of the delivery of activities, the Kruskal-Wallis test yielded $\chi^2(3) = 113.62$, $p < 0.001$, which is highly significant. Third year (mean rank = 206.2) and fourth-year students (mean rank = 205.5) reported higher satisfaction with activity delivery compared to first year (mean rank = 111.39) and second-year students (mean rank = 101.13).

For collaboration activities, the test yielded $\chi^2(3) = 87.14$, $p < 0.001$, confirming a significant difference. Third-year students (mean rank = 204.13) and fourth-year students (mean rank = 188.2) rated collaboration activities more positively than first year (mean rank = 130.96) and second-year students (mean rank = 97.45). With regards to the utilization of Moodle activities such as quizzes, the test showed a significant difference, $\chi^2(3) = 23.66$, $p < 0.001$. Second-year students (mean rank = 187.44) reported higher utilization than third year (mean rank = 134.24) and fourth-year students (mean rank = 128.89), while first-year students (mean rank = 161.53) fell between these groups.

Since all p-values were less than 0.05, the null hypothesis was rejected for each variable, indicating that Moodle usage patterns significantly differ across the different years of study. The table below gives an illustration of the findings. See table 7 and 8 below.

Table 7: Kruskal Wallis Mean ranking - Year of study x Moodle usage

		N	Mean Rank
Clear understandable	1st year	81	143.45
	2nd year	79	131.05
	3rd year	82	166.01
	4th year	65	179.88
	Total	307	
Database_easy_navigate	1st year	81	157.24
	2nd year	79	130.09

	3rd year	82	142.66
	4th year	65	193.32
	Total	307	
Organization_activity	1st year	81	123.39
	2nd year	79	111.12
	3rd year	82	190.6
	4th year	65	198.08
	Total	307	
Delivery_activity	1st year	81	111.39
	2nd year	79	101.13
	3rd year	82	206.2
	4th year	65	205.5
	Total	307	
Collaboration activity	1st year	81	130.96
	2nd year	79	97.45
	3rd year	82	204.13
	4th year	65	188.2
	Total	307	
Activity_utilize_moodle	1st year	81	161.53
	2nd year	79	187.44
	3rd year	82	134.24
	4th year	65	128.89
	Total	307	

Table 8: Kruskal Wallis test - Year of study x Moodle usage

	Clear understandable	Database_easy_navigate	Organization activity	Delivery_activity	Collaboration_activity	Activity_utilize_moodle
Chi-Square	16.89	27.73	80.25	113.62	87.14	23.66
df	3	3	3	3	3	3
Asymp. Sig.	0.001	0	0	0	0	0

Hypothesis 3:

Null Hypothesis (H_0): There is no significant difference in perceived benefits of Moodle across different age groups.

Alternative Hypothesis (H_1): There is a significant difference in perceived benefits of Moodle across different age groups.

The hypothesis aimed to determine whether there is a significant difference in the perceived benefits of Moodle across different age groups. A Kruskal-Wallis test was used because the Shapiro-Wilk test indicated that the data was not normally distributed, $W(307) = 0.77$, $p < 0.001$, confirming the need for a non-parametric test. The Kruskal-Wallis test results revealed significant differences across age groups for all the measured variables: Moodle's ability to improve access to information, enhance effectiveness, student helpfulness, and the impact of help rendered on ease of use.

For Moodle's ability to improve access to information, the Kruskal-Wallis test yielded $\chi^2(4) = 31.81$, $p < 0.001$, indicating a statistically significant difference. The mean ranks showed that students aged 26–30 years (mean rank = 184.16) and those aged 36+ years (mean rank = 182.08) reported greater perceived benefits in improved access to information compared to students aged 20–25 years (mean rank = 130.97) and those aged 31–35 years (mean rank = 122.04).

For Moodle's ability to enhance effectiveness, the test yielded $\chi^2(4) = 39.22$, $p < 0.001$, confirming a significant difference. Students aged 36+ years (mean rank = 186.18) and those aged 15–19 years (mean rank = 176.17) perceived greater effectiveness from Moodle compared to students aged 20–25 years (mean rank = 117.32) and those aged 31–35 years (mean rank = 149.48).

Regarding student helpfulness in using Moodle, the Kruskal-Walli's test yielded $\chi^2(4) = 15.14$, $p = 0.004$, indicating a statistically significant difference. The mean ranks showed that students aged 31–35 years (mean rank = 187.84) perceived greater helpfulness from fellow students compared to students aged 36+ years (mean rank = 133.7) and those aged 15–19 years (mean rank = 135.39). For help rendered making Moodle easier to use, the test yielded $\chi^2(4) = 29.52$, $p < 0.001$, which is statistically significant. Students aged 31–35 years (mean rank = 188.14) and those aged 15–19 years (mean rank = 183.62) reported greater perceived ease due to help rendered compared to students aged 36+ years (mean rank = 116.91). Table 9 and 10 below provide a further illustration.

Table 9: Kruskal Wallis Mean ranking - Age of respondents x Moodle benefits

		N	Mean Rank
Moodle_improve_access_to_info	15-19 years	38	175.43
	20-25 years	111	130.97
	26-30 years	32	184.16
	31-35 years	46	122.04
	36 + years	80	182.08
	Total	307	
Moodle_enhances_effectiveness	15-19 years	38	176.17
	20-25 years	111	117.32
	26-30 years	32	180.97
	31-35 years	46	149.48
	36 + years	80	186.18

	Total	307	
Students_are_helpful	15-19 years	38	135.39
	20-25 years	111	162.19
	26-30 years	32	149.8
	31-35 years	46	187.84
	36 + years	80	133.7
	Total	307	
Help_rendered_makes_it_easy	15-19 years	38	183.62
	20-25 years	111	160.38
	26-30 years	32	140.34
	31-35 years	46	188.14
	36 + years	80	116.91
	Total	307	

Table 10: Kruskal Wallis test - Age of respondents x Moodle benefits

	Moodle_improve_access_to_info	Moodle_enhances_effectiveness	Students_are_helpful	Help_rendered_makes_it_easy
Chi-Square	31.81	39.22	15.14	29.52
df	4	4	4	4
Asymp. Sig.	0	0	0.004	0

Hypothesis 4

H_0 : There is no significant difference in the challenges faced by full-time, part-time, and distance learners when using Moodle.

H_1 : There is a significant difference in the challenges faced by full-time, part-time, and distance learners when using Moodle.

The hypothesis examined whether there is a significant difference in the challenges faced by full-time, part-time, and distance learners when using Moodle. The Shapiro-Wilk test showed that the data was not normally distributed, $W(307) = 0.68$, $p < 0.001$, confirming the need for a non-parametric test. A Kruskal-Wallis test was conducted to compare the differences in four key challenges: ease of logging in, efficiency in submitting assignments, encouragement of interaction, and clarity of lecturers' instructions. The results indicated significant differences across study modes for all four challenges: ease of logging in ($\chi^2(1) = 26.8$, $p = 0.000$), efficiency in submitting assignments ($\chi^2(1) = 17.92$, $p = 0.000$), encouragement of interaction ($\chi^2(1) = 22.43$, $p = 0.000$), and clarity of lecturers' instructions ($\chi^2(1) = 23.33$, $p = 0.000$). The mean ranks showed that distance learners consistently reported higher values for all four challenges compared to full-time learners. Since the p-values were all less than 0.05, the null hypothesis was rejected, confirming that the type of study mode significantly influences the challenges faced by students when using Moodle. (See table 11 below

Table 11: Kruskal Wallis Mean ranking - Mode of study x Challenges using Moodle

		N	Mean Rank
Logging_in_easy	Distance	99	177.79
	Full time	151	128.86
	Part time	57	179.29
	Total	307	
Efficient_submitting_assignment	Distance	99	172.63
	Full time	151	130.86
	Part time	57	182.94

	Total	307	
Interaction_encouraging	Distance	99	176.73
	Full time	151	129.29
	Part time	57	179.99
	Total	307	
Lecturers_instructions_easy	Distance	99	175.94
	Full time	151	128.53
	Part time	57	183.36
	Total	307	

4.6 Integration of Findings in an Explanatory Sequential Design

The findings from your study align well with the explanatory sequential design, which involves collecting and analysing quantitative data first, followed by qualitative data to explain or elaborate on the quantitative results. In your study, the quantitative data revealed significant differences in Moodle usage patterns across different years of study and modes of study, highlighting areas where students faced challenges or showed varying levels of satisfaction. The subsequent qualitative data provided deeper insights into these patterns, explaining why certain groups of students, such as distance learners or senior students, experienced specific challenges or benefits. For instance, the qualitative responses shed light on the reasons behind the higher satisfaction levels among fourth-year students and the difficulties faced by distance learners, such as internet connectivity issues and lack of direct interaction with instructors. This sequential approach allowed for a comprehensive understanding of the findings, ensuring that the quantitative results were contextualized and enriched by the qualitative insights, thereby providing a holistic view of students' experiences with Moodle at ZCAS University.

4.7 Summary

The chapter presented the findings of the study which sought to assess students' perception on the usefulness of Moodle at ZCAS University. It presented the demographic characteristics of the participants; students' perspectives towards the use of Moodle; students' usage of Moodle; benefits of using Moodle and challenges in using Moodle. The findings highlighted that most students found Moodle useful for coursework, but their motivation for using it was largely due to compulsory requirements rather than personal preference. While 63.5% of students had intermediate ICT skills, many lacked formal training on Moodle, relying on self-learning or peer support. 79.5% found the platform easy to use, and 75% agreed that it improved access to academic information thereby enhancing their effectiveness in completing tasks. Inferential statistics indicated significant differences in Moodle perceptions based on gender($U = 31{,}789.5$, $Z = -7.6545$, $p < 0.001$), study year ($\chi2(3) = 16.89$, $p = 0.001$), and age ($\chi2(4) = 39.22$, $p < 0.001$) with 4th year students and participants aged 36+ reporting the highest benefits. Distance learners faced most challenges with logging in. assignment submission and lecturer engagement. Also, motivation was basically due to necessity with 20.85% of those with orientation and 20.34% without orientation being self-motivated. While Moodle enhances accessibility, gaps in orientation and lecturer feedback/engagements persist hence the need for improved training and support.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Overview

This chapter will give a discussion of the research findings as presented in the previous chapter. The discussion has been presented following the four objectives of the study.

5.1 Students Perspectives towards Use of Moodle

Students' perspectives on the usefulness of Moodle at ZCAS University were assessed. Four specific questions were asked: was Moodle as an eLearning platform useful at ZCAS University? Did students possess ICT competences to use Moodle? Where do students oriented to use Moodle at ZCAS University? Do students have the ability to navigate Moodle as an eLearning platform? It was anticipated that students perceived Moodle as an important and helpful eLearning platform.

Results of the current study from a semi-interview guide have shown that Moodle was useful as an eLearning platform tool used to conduct teaching BBA. This is contrary to Susiana and Ahmad (2021) who found that using Moodle-based e-learning did not increase student learning outcomes in the introductory material of accounting at Andalas University. Kakasevski *et al.* (2008) in Macedonia also found that Moodle was perceived not useful because students had significant problems with features of online chat and discussion forums. Meanwhile, a number of studies in other countries have shown that Moodle was useful and perceived to be a powerful eLearning platform that fosters teaching and learning in colleges and universities (Mwanaidi, 2022; Gicheru, 2023; Mtebe and Raisamo, 2014; Venter *et al.* 2012; Prasad, 2015; Qin *et al.* 2022; Yue and Weng, 2016; Unwin *et al.* 2020; Ssekakubo *et al.* 2011).

The explanation can be that the world should not reject technology but accept, adopt, use it and perceive it as beneficial in bettering people's lives. Gicheru (2023) emphasized that Moodle was a free computer application platform that only required internet connectivity and basic computer skill to actualize online learning to college and university students. Qin *et al.* (2022) positioned Moodle as a global, convenient, and free online learning management system based on the principles of interactivity and creativity. It is an easy-to-learn and easy-to-use platform designed to provide educators, administrators, and students with a single, reliable, secure, and integrated system to create personalized environments that enhance both teaching and learning. It is sad that

some institutions elsewhere cannot provide this facility satisfactorily. Therefore, administrators at higher institutions of learning, higher education stakeholders, lecturers and students must work towards improving and embracing this facility if citizens are to take advantage of technological advancements in education provision and quality assurance.

Furthermore, the study in figure 3 of chapter 4 revealed that the majority of 195 representing 63.5% of the study participants had intermediate ICT competence; 73 representing 23.8% of study participants rated had an expert level of ICT competence. 39 representing 12.7% of the participants had a beginner level of ICT competence. Generally, results showed that students were computer literate. Further, the results showed that the year of study did not significantly impact ICT competence as evidenced by first-year students having the highest proportion of ICT competence, contradicting the expectation that senior students would be more skilled. This suggests that students may have acquired ICT skills prior to university, rather than developing them progressively through their academic years. This finding is in line with Kim and Kim (2013), Reid (2019), Gicheru (2023) and Solihin and Sari (2023) who said that basic computer literacy was enough to help operate on eLearning platforms. It can be argued that students did not require complex computer skills to operate Moodle. Moodle was just an addition to education quality based on the principles and theoretical perspectives of constructivism which places a learner as a participant and not a spectator in the process of learning. While using Moodle, learners were expected to be involved using basic computer skills that would lead to knowledge construction and change in knowledge, skills, values, attitudes and perceptions. Further, Gicheru (2023) posited that if the person has high abilities to use computer technologies, he/she is more likely to have a positive attitude towards use of a system such as the Moodle learning platform.

The study(figure 4 of chapter 4) revealed that 184 study participants representing 60% of the population sample did not receive orientation or training regarding the use and navigation of the eLearning portal while 123 representing 40% of the study participants had received orientation. Those that received orientation further indicated that orientation did improve their ability to use the portal thereby increasing their self -confidence. It can therefore be said that orientation or training on how to use the eLearning portal is an important aspect of the student learning process as this may influence their perception of the platform's usefulness. However, it may be interesting to note that the students who had not received any orientation or training became familiar with how to use the platform via self-exploration or colleagues. This goes to show that one's belief in

ability to use computer technologies has an influence on system usage. Torkzadeh and Dyke (2002) shared similar sentiments that self-belief and determination has an influence on system use and helps an individual to acquire more skills associated with effective computer use which ultimately leads to effective system use and positive perception.

The study revealed a statistically significant difference in students' perspectives on Moodle based on gender ($U = 31{,}789.5$, $Z = -7.6545$, $p = 1.954e\text{-}14$). Female students reported higher satisfaction with Moodle's ability to improve access to information and enhance effectiveness than male students. These results align with findings from Al-Azawei et al. (2017), who found that female students demonstrated higher levels of engagement and positive attitudes toward learning management systems (LMS) than their male counterparts. Similarly, Li and Zheng (2017) reported that female students were more inclined to leverage LMS tools for academic success due to greater motivation and adaptability to online learning platforms. The medium effect size (0.31) observed in this study reinforces the notion that gender differences in LMS usage are moderate but meaningful. This suggests that Moodle's design and user experience may resonate more with female learners, potentially due to differences in learning styles and technology acceptance.

Considering that orientation and training is an important activity, higher learning institutions in Zambia should not always take for granted that students would discover things on their own. Failure to orient students to good innovations such as Moodle eLearning platform may hinder its use. It is therefore recommended to put orientation and training on the top agenda of student recruitment, enrolment and admission if platforms like Moodle would be useful and serve their intended purposes. Conversely, students who doubt their ability to accomplish difficult tasks see these tasks as threats and give up quickly thereby leading to task avoidance, passivity, lack of engagement and a resignation that failure is inevitable (Bandura, 1994). To abet this situation, the importance of training and orientation cannot be overemphasized in fostering confidence in students in higher learning institutions to use eLearning platforms. It is the confidence one has in doing something (Kurbanoglu, 2009), that acts as a foundation of motivation for just about everything humans do.

5.2 Students Usage of Moodle

To establish how students were using Moodle the following questions were asked: what motivated students to use Moodle? How did students perceive the easiness and difficulty of using Moodle?

How was information clarity and portal navigation? How did the collaboration activity tool function? What organizational activities did Moodle provide? It was anticipated that students would use the Moodle eLearning platform for course work and academic purposes.

Findings from Figure 6 revealed that both students who received orientation and those who were not oriented were self-motivated in their use of the eLearning platform. The students used the Moodle platform mainly because they had no choice since the lecturers posted their work on the platform. Filippidi *et al*. (2010) commented that students were motivated to use Moodle because of its features that included assignment, forums, questionnaire, quizzes, glossary, feedback, and wiki. It is true that Moodle should provide an exciting platform for exchanging ideas. Being an online repository, it must be interactive enough to keep the students busy. This means that lecturers should take an active role by engaging students in critical thinking in a way to discover more frontiers of knowledge. Thus, students who spent many days and many topic views had better learning results (Mödritscher *et al.,* 2013). It can therefore be recommended that institutions should continue adding exciting features of self-help to motivate students with less physical guidance.

Further, the findings in Figure 7 showed that students in BBA from first year to fourth year found the use of the Moodle platform to be easy and useful. This is in line with Gicheru (2023) who posited that Moodle was the easiest eLearning platform to use. Tarigan (2011) attests that easiness and increased levels of students' satisfaction with courses. Similarly, satisfied learners tend to complain less and have possibilities of taking more courses (Booker and Rebman, 2005). According to Palmer and Holt (2009), satisfaction has a positive correlation with quality of learning outcomes. The study also revealed that information in the course modules was clear and understandable. This is commendable as there was no need to put puzzles and jigsaws for access to Moodle. Putting parables on Moodle may not be understood by culturally different people. Therefore, it is recommended to put precise yet concise information that reaches everybody with less jargon to interpret. In addition, another indicator for the usefulness of a Learning Management System is the clarity and quality of information in the various course modules. Information quality is basically the students' perceived output produced by the system (Al-Busaidi, 2012). It may consist of timetables, calendars, teaching materials, and discussion forums which must all be properly prepared to ensure user satisfaction (Sun et al., 2008).

The Kruskal-Wallis test showed significant differences in Moodle usage patterns across different years of study for all variables measured. Fourth year students consistently reported higher satisfaction with Moodle's clarity of course modules ($\chi^2(3) = 16.89$, $p = 0.001$), ease of navigating the database ($\chi^2(3) = 27.73$, $p < 0.001$), and organization of activities ($\chi^2(3) = 80.25$, $p < 0.001$). This is consistent with findings by Martín-Blas and Serrano-Fernández (2009), who noted that senior students tend to develop greater familiarity and competence with LMS platforms over time, leading to higher satisfaction and efficiency in usage. Similarly, Jaggars and Xu (2016) reported that senior students are better equipped to use online learning resources due to accumulated experience and improved digital literacy. The higher satisfaction levels among third- and fourth-year students in activity delivery and collaboration activities align with the concept that prolonged exposure to LMS platforms fosters increased comfort and engagement. However, the lower rankings among first- and second-year students suggest that additional orientation and training may be required to help newer students navigate Moodle more effectively.

5.3 Benefits of Using Moodle

The perceived benefits of Moodle as an eLearning platform at ZCAS was explored and a question was asked: What were the perceived benefits of using modular object-oriented dynamic learning environment at ZCAS? It was anticipated that students would highlight the benefits of eLearning platform as experienced at the Institution.

The students were asked whether they felt that the e-Learning portal at ZCAS improved their ability to access the information they need for academic work. The findings from table 3 show that 230respondents, representing 75% of the participants, improved access to information. 147 representing 48% of the study participants agreed with the statement that the ‘eLearning portal improves students’ access to information on academic work’ and 82 representing 27% of the study participants strongly agreed with the statement. Furthermore, 9 representing 3% of the participants felt that their access to the e-Learning portal did not improve their access to academic information at ZCAS. Similarly, findings from table 4, show that eLearning portal enhanced student’s effectiveness in understanding and completing academic tasks. These findings are in line with Saade and Kira (2009) who said that there was a strong positive relationship between use of eLearning platforms and performance in various academic activities. Umek *et al.* (2015) reported significant improvements in student academic performance after the introduction of the Moodle

learning platform at the University of Ljubljana. They further stated that there was a relationship between learning and motivational factors in higher education as different types of interaction among students and teachers were predictors for student motivation in e-learning environment. It can be argued that eLearning platforms should continue to be used, promoted and harnessed in higher institutions of learning to promote learner performance. That means supporting Moodle and other related eLearning platforms that benefit learners was a must and priority.

Results from table 4 further revealed that 92 representing 30% of the study participants were not sure whether their access to information through the eLearning portal enhanced their effectiveness in understanding and completing academic tasks. This is contrary to Yue and Sukhminder (2016) in Malaysia who found that the online assessment in Moodle was beneficial, valid, secure, and practical and did not cause any problems to the students.

In addition, the findings from table 5 and table 6 also indicated that students who were more conversant with Moodle were helpful to those that found it challenging and that the help rendered ultimately made it easier to use and navigate the platform. Claggett and Goodhue (2011) stated that many people use computers and new information systems solutions enthusiastically while others seem unnaturally resistant and convinced of their failures before beginning. This difference is what Compeau and Higgins (1995) described as 'computer self-efficacy, which is often independent of whether the individuals have the skills and abilities to perform tasks with computers or computer devices.

Findings revealed that Moodle helped to provide quality teaching and positive attitudes in students, reaching more students at the same time thereby making students take more courses. It helped improve students' digital literacy and submission of assignments. Costa (2012) in Portugal found that Moodle was used as a repository of materials where students could easily access content online. Mahwish (2014) in Saudi Arabia reported that students found it fruitful to communicate with other students and teacher using the online communication tools. The module of online assignment submission and grade checking was easy for them. The content and resources uploaded on the e-Learning portal were informative and the ease of accessing them with autonomy was very useful. The researcher concluded that these Moodle features played as significant predictors for students' motivation to use e-Learning system. Therefore, it would be recommended to upscale Moodle and increase its features to make it more interesting, interactive and beneficial to learners.

Ozkan and Koseler (2009) posited that learners preferred content that was not only up-to date but also well-organized, clearly presented, interactive and useful. For example, necessary announcements that were made on time enabled the students to be abreast and feel more comfortable with the course content, thereby resulting in higher satisfaction rates. The current study concluded that Moodle features played a significant role in students' motivation to use eLearning system through quiz, survey and discussion modules.

The study revealed significant differences in perceived benefits of Moodle across different age groups. Students aged 26–30 years and those aged 36+ years reported greater perceived benefits in Moodle's ability to improve access to information ($\chi^2(4) = 31.81$, $p < 0.001$) and enhance effectiveness ($\chi^2(4) = 39.22$, $p < 0.001$). These findings are consistent with research by Kintu et al. (2017), which indicated that older students often have greater motivation and practical experience, contributing to more effective use of LMS platforms. Interestingly, students aged 31–35 years perceived greater helpfulness from fellow students ($\chi^2(4) = 15.14$, $p = 0.004$) and greater ease of use due to help rendered ($\chi^2(4) = 29.52$, $p < 0.001$), supporting previous findings by Sun and Rueda (2012), who noted that peer interaction enhances learning outcomes in e-learning environments. The variation in perceived benefits among younger students may reflect differences in learning preferences and prior exposure to technology-based learning tools.

5.4 Challenges in Using Moodle.

To establish the challenges that students were facing at ZCAS in using Moodle as an eLearning platform, it was asked: What were the challenges that students faced in using modular object-oriented dynamic learning environment at ZCAS? It was expected that although the provision of training and support to instructors was vital, user perspective on system login process, portal efficiency when submitting academic work, interaction on the portal as well as clarity of the lecturer's instructions placed on the portal was important to be investigated.

The Kruskal-Wallis test confirmed significant differences in the challenges faced by full-time, part-time, and distance learners when using Moodle. Distance and part-time learners consistently reported greater difficulty in logging in ($\chi^2(1) = 26.8$, $p = 0.000$), submitting assignments ($\chi^2(1) = 17.92$, $p = 0.000$), encouraging interaction ($\chi^2(1) = 22.43$, $p = 0.000$), and understanding lecturers' instructions ($\chi^2(1) = 23.33$, $p = 0.000$). These findings echo research by Nguyen (2015), which highlighted that distance learners face greater barriers in accessing LMS platforms due to

inconsistent internet connectivity, lack of direct interaction with instructors, and limited technical support. Additionally, Means et al. (2013) emphasized that distance learners often face challenges related to self-regulation and engagement, which may explain their lower satisfaction with Moodle's interaction features. Addressing these disparities may require targeted support, such as enhanced technical assistance and more interactive course designs tailored to distance learners' needs.

The findings indicated that Moodle was a good programme, but students were not properly oriented towards how to use it. This disadvantaged student active engagement of Moodle at ZCAS. This finding is contrary to Price *et al.* (2021) who analyzed that faculty online learning community as a mechanism for supporting faculty implementation of a guided-inquiry curriculum should not only provide training and support for instructors but also students. Training and orientation is paramount if students being the recipients were to absorb the innovation. This means that serious training and orientation must be prioritized for all students to enhance quality assurance and guarantee learner performance. During the interview schedule students reported no challenges in logging into the eLearning portal. We can deduce that Interaction between learners and online content is one of the imperative factors in determining the efficacy of online learning towards the creation and maintenance of sustainable learning communities. Interaction with content is an internal dialogue of reflective thought that occurs between learner and the substance; it is often triggered and supported by events in the learning environment. This basically speaks to the system and quality because the more a website is user-friendly and structured with login process that is clear and easy to follow; the more it will make system quality better of an e-learning system (Zheng *et al.*, 2013). Despite these breakthroughs by individual students, orientation and training were important for sustainable development in absorption and usage of eLearning platforms.

Further the study found that there was delayed feedback or sometimes a lack of feedback from lecturers. This is contrary to Ssekakubo *et al.* (2011) in Zimbabwe who found that students' challenges evolved around features of online chat and discussion forums. Dube and Scott (2014) reported similar findings in several institutions in Zimbabwe, Mozambique, and Sudan. The problem of lack of feedback is deep rooted and sited in the lack of proper training and orientation to students and lecturers. Hall (2006) argues that successful implementation of feedback mechanisms are dependent on proper training and orientation of instructors. Universities and colleges, therefore, should channel part of their resources towards instructor training and

workshops to capacity build staff for quality service delivery. Doing that may place Moodle as an eLearning platform on a competitive stage. Having Moodle alone is not enough but qualified human resources that can add value to natural and technological resources.

Therefore, interaction time on the portal between students and lecturers as well as among students of the same cohort must be sufficient with clear instructions. Interpersonal interaction and improved feedback mechanisms on a learning portal is likely to result in an increase in perceived learning (Richardson and Swan, 2003; Sher, 2009; Swan, 2002), higher levels of student and faculty satisfaction with the course, (Su et al., 2005) and improved student academic achievement (Long *et al.,* 2011). In addition, Berge (1999) elaborates more on the benefits of feedback in teaching and learning. They state that when students can be given feedback by their instructors on content and assignments done, they can build within themselves and communicate a shared meaning to 'make sense' of what they are learning. It is therefore clear that students missed prompt feedback from their lecturers at ZCAS. Noting the foregoing, there is need to improve feedback mechanism on the portal so that those students who did not find it encouraging could see and appreciate the value of interpersonal and intrapersonal interactions on Moodle eLearning platform.

On the same challenges, the study further found that there was a lack of reliable internet connection making access to Moodle very difficult. Mwanaidi (2022) in Tanzania observed that internet connectivity was a problem in higher education institutions. It was either connected to internet was slow or there was no internet at all. Therefore, accessibility Moodle was problematic. To address this problem, universities and colleges must work on improving internet connectivity to offset challenges that keep students away from Moodle. This may require additional investment in ICT infrastructure to guarantee quality service delivery. Knowing ICT investments may require huge funding, governments and corporations are invited and called upon to help and resuscitate higher education from a complete lag or fall in the competitive global stage. Therefore, it is recommended that addressing internet challenges in higher institutions is a matter of urgency to maximise benefits.

5.5 Generalisability of findings

The findings from this study on the use of Moodle as an eLearning platform at ZCAS University can be generalized to other higher education institutions with similar technological infrastructure and student demographics. The positive perceptions of Moodle's usefulness and the high levels of ICT competence among students suggest that Moodle can be an effective tool for enhancing eLearning experiences in diverse educational settings. Despite the challenges related to orientation and internet connectivity, the overall benefits observed, such as improved access to information and enhanced academic performance, indicate that Moodle's implementation can lead to significant educational advancements. These results align with previous studies conducted in various countries, reinforcing the notion that Moodle's effectiveness is not limited to a specific institution or region. Therefore, higher education institutions globally can consider adopting Moodle to foster interactive and engaging learning environments, provided that adequate training and technical support are ensured.

5.6 Summary

The findings of the research indicated that students perceived Moodle as a useful eLearning platform tool used to conduct teaching and learning at ZCAS in the field of Bachelor of Business Administration. Students were computer literate despite not receiving adequate orientation and training on the use of Moodle as an eLearning platform. Students used Moodle because they had no choice and needed to use it to submit assignments and other course related work. Benefits included access to information, quality teaching, positive attitudes in students and the programme could reach out to more students at the same time. Challenges included lack of proper orientation to students, delayed or lack of feedback and lack of internet connectivity.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.0 Overview

The previous chapter discussed findings of the study and related them to what other researchers also found in other areas, the extent to which the objectives of the study were achieved were established. In this chapter, conclusions based on the issues and problems raised in this study are presented.

6.1 Conclusion

- The findings of the study revealed that students perceived Moodle as a useful eLearning platform tool used to conduct teaching and learning particularly for those pursuing BBA.
- The study also found that students were generally computer literate despite not receiving adequate orientation and training on the use of Moodle as an eLearning platform. Moodle's orientation did not teach computer literacy but basic computer literacy in students was a plus in helping students navigate and help fellow students how to use the system. This is most relevant to the research objective number 4 which sought to determine the challenges students faced in using Moodle. Despite not receiving adequate orientation, computer literacy enabled the students navigate the system and assist peers.
- Students used Moodle platform mainly because they had no choice since the lecturers posted their work on the platform hence, they needed to download and upload assignments, participate in forum discussions, filing in of questionnaires, quizzes and wiki which was inconsistent. This basically means that some students were not interested in using Moodle but had no choice because the world had moved on to using technology as a means for communication and interaction in academia.
- The study revealed that students perceived many benefits in using the eLearning platform. For example, they cited access to information, quality teaching, positive attitudes in students and the programme could reach out to more students at the same time making it a good tool for academic use. The eLearning portal enhanced students' effectiveness in understanding and completing academic tasks.

- The study also revealed significant differences in Moodle usage patterns across different years of study. Fourth-year students consistently reported higher satisfaction with Moodle's clarity of course modules, ease of navigating the database, and organization of activities. This suggests that prolonged exposure to Moodle fosters greater familiarity and competence, leading to higher satisfaction and efficiency in usage. However, first- and second-year students showed lower satisfaction levels, indicating a need for additional orientation and training to help newer students navigate Moodle more effectively.
- Further, the study revealed numerous challenges that include lack of proper orientation to students in the use of Moodle, delayed or lack of feedback from some lecturers and lack of stable and reliable internet connectivity.

6.2 Recommendations

- ZCAS University should conduct regular and comprehensive training should be provided to all students to ensure they can effectively use Moodle. This training should be considered a soft skill, as it enhances students' ability to navigate digital learning environments and supports their overall academic success.
- ZCAS University should actively engage and train students on the effective use of Moodle, highlighting its role beyond just a repository for information and course work. This will enable students maximize Moodle’s interactive features for learning, collaboration and academic success.
- Noting the benefits of Moodle, ZCAS University should upscale its use by adding more exciting features that require little assistance to use, most preferably self-help features. This will motivate students as they navigate to discover more exciting features that make life for them.
- ZCAS University should improve its feedback mechanisms by ensuring timely responses from lecturers on assignments and other course related issues. Further, incorporating feedback features and regular student surveys may help to improve student engagement and encourage more consistent use of Moodle.

6.3 Recommendations for Future Research

Research on the use of Moodle as an eLearning platform in universities and colleges should remain open to the researchers.

a) Mechanisms of students' orientation towards use of Moodle as LMS
b) Impact of ICT infrastructure in the provision of eLearning services in higher institutions of learning
c) The role of feedback in the provision of eLearning services to students in higher institutions of learning
d) Models that support exciting eLearning programmes.

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APPENDICES

Appendix A: Information and consent form for students.

Title: An assessment of students' perspective on the usefulness of Moodle at ZCAS University**.**

Section A: Information Sheet (for men and women>18years old)

My name is Dubeka, Buumba Muntanga. I am pursuing a Master of Library and information Science at the University of Zambia in the School of Education. You are requested to participate in this study which is looking at the students' perception on the usefulness of Moodle Learning Management System at ZCAS University.

Being a ZCAS University student, you meet the entry criteria, and you have been randomly selected to take part in the study. The study will involve answering a few background questions and other questions that will help you to get an understanding on your perspective on the usefulness of Moodle at ZCAS University. Please feel free to contact or ask me to clarify any words or phrases you may not understand.

Purpose of the study

The purpose of the study is to assess students' perspective on the usefulness of Moodle at ZCAS University.

Type of Study Intervention

The study involves providing responses to questionnaires that will be administered to you.

Participant Selection

You are being asked to take part in this study because you are a student at ZCAS University and use the Moodle platform. The study would like to get your views on how you view its usefulness and also on any changes that may need to be made to improve your learning experience.

Voluntary Participation

It is entirely voluntary to participate in this study. You can decide whether to take part or not and if you choose not to part, nothing will be done for you. You may also decide to change your mind by stopping responding during the process.

Procedures

You are invited to take part in this study by responding to a questionnaire. If you do not wish to answer any question, you may skip and move to the next. The information recorded is confidential and your name will not be included in the questionnaire.

Risk and discomfort

If you are free to not answer any questions or take part in the study if you the question(s) make you uncomfortable.

Reimbursements

This study does not offer any incentive.

However, taking part in the study will help to give an understanding on your views and how the Moodle platform could be improved to enhance your learning experience.

Confidentiality

All information provided during the study will be kept confidential. No one apart from the Principal Investigator will be able to see the collected information and there will be no use of names on the questionnaires.

Sharing of Results

The results from this study will be shared to the Moodle administrators at ZCAS University. Confidential information will not be shared.

Right to Refuse or Withdraw

You are free to withdraw from the study or refuse to take part in the study. There is no negative effect associated with withdrawing or not taking part in the study.

Who to Contact

If you have any questions, you may ask now, during or after the study has started. Kindly contact me on:

Cell- +260977344797 or Email- dubekabumba2@gmail.com

This proposal or protocol has been reviewed and approved by HSSREC which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find out more

about the IRB, contact:

Prof Sodi Munsaka,

Humanities and Social Sciences, Research Ethics Committee,

University of Zambia

P O Box 32379

Lusaka

OR

Professor Erastus Mwanaumo

Director, Directorate of Research and Graduate Studies

University of Zambia

P O Box 32379

Lusaka.

Part II: Certificate of Informed Consent

I have been invited to participate in a study on the assessment of students' perspective on the usefulness of Moodle at ZCAS University. I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked to have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Name of Participant_____

Signature of Participant _____

Date _____

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the participant.

Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Contact for questions

Principal Investigator

Names: Dubeka, Buumba Muntanga.

Phone: +260977344797

E mail:dubekabumba2@gmail.com

Appendix B: Questionnaire.

The University of Zambia

Directorate of Research and Graduate Studies

School of Education

Department of Library and Information Science

Topic: Students' perspectives on the usefulness of Moodle at ZCAS University

Dear Sir/ Madam,

Thank you for sparing your time to give your input in this study. This exercise is purely for academic purposes and the information you will provide will not be used for any other purposes. Please respond to the questions as freely as possible because your input will be of great help in understanding your perception as a student on the usefulness of Moodle Learning Management System at ZCAS University.

The purpose of this study is to get an understanding of the students' perspective on the usefulness of the E Learning Portal.

Be rest assured that your responses will be treated with utmost confidentiality and you will in no way be required to give your identification.

I sincerely thank you in advance

Buumba M. Dubeka

University of Zambia

Instruction: Use a tick (√) and/or the spaces provided to indicate your response where appropriate.

1.0. DEMOGRAPHIC CHARACTERISTICS

1.1 Gender

(a). Male [ ] (b). Female [ ]

1.2 What is your age range?

(a). 18-26years [ ] (b). 27-35 [ ]. (c). 36-44 [ ] (d).45-53[ ] 54+ [ ]

2.0. STATUS OF ENROLMENT

2.1. What is your mode of study at ZCAS University?

(a). Full time [ ] (b). Part Time [ ] (c). Distance [ ] (d.)Blended [ ]

2.2 What is your year of study?

(a). First year [ ] (b). Second Year [ ] (c) Third Year [ ] (d) Fourth Year [ ]

3.0. Students' perspectives towards usefulness of Moodle

3.1. How do you rate your ICT competency? …

(a). Expert [ ] (b).Intermediate [ ] (c). Beginner [ ]

3.2 Have you received orientation or training on the use of Moodle platform?

(a). Yes [ ] (b). No [ ]

3.2.1 Did the orientation improve your ability in using the navigation tools on the eLearning Portal/Moodle platform?

(a). Yes [ ] (b). No [ ]

3.2.2 If No, how did you come to be familiar with the eLearning portal navigation tools?

3.3. Has your knowledge of navigating the Moodle/eLearning portal dashboard been useful in your academic work?

(a). Yes [ ] (b). No [ ]

3.3.1 Please explain your response in 3.3

3.4. What motivates you to use the Moodle/eLearning Portal?

(a) Self-Motivation [ ] (b) Lecturers [ ] (c). It is compulsory [ ]

(d) Course mates [ ] (e) No other alternatives present [ ]

Benefits of Moodle as LMS

3.5. The eLearning Portal/Moodle platform improves students' access to information regarding academic work.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

3.6 The ELearning portal/Moodle platform enhances students' effectiveness in understanding and completing academic tasks.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

3.6.1. Please explain your response in 3.6

3.7. Students who are very conversant with the Moodle/ELearning portal are very helpful to those who find it challenging.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

3.8 The help rendered by my fellow students to use Moodle makes it easier for me to use the Portal.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

4. Students Usage of Moodle

4.1 How long have you been using Moodle/eLearning Portal?

(a) 6months [ ] (b) 1 year [ ] (c).2 years [ ] (c). 3 years [ ] (d). 4 years [ ]

4.2 Do you find it easy to get the information you need from Course Modules on the Portal/ Moodle platform?

(a). Yes [ ] (b). No [ ]

4.3 The information in all course modules is clear and understandable.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

4.3 The database module of the ELearning portal/Moodle platform is easy to navigate to the activity you wish to engage in.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

4.4 How would you rate the organization activity of your Moodle which provides lessons with notes and other instructional activities?

(a). Exceptional [ ] (b). Very good [ ] (c). Good [ ] (d). Fair [ ]

(e). Poor

4.5 The 'Delivery' activity tool of Moodle is responsible for assignments and Workshops, which allows lecturers/instructors to interact with students' work. How well do you utilize it for its intended purpose?

(a). Exceptionally well [ ] (b). Very well [ ] (c). Well [ ] (d). Fairly well [ ]

(e). Poor [ ]

4.6 Communication is another Moodle tool that enables chats, forums and news. How often do you access these modules?

(a). Very often [ ] (b). Often [ ] (c). Not often [ ] (d). Hardly [ ]

(e). Never [ ]

4.7 The ELearning Portal/ Moodle platform's 'Collaboration' activity tool in stocking definitional terms and simplified concepts is very rich in serving its intended purpose of that being a glossary and wiki?

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

4.8 The 'Assessment' activity is provided in various modules such as choice, quiz, survey and feedback. Do you find it efficient when you take up an assessment via the Moodle platform?

(a). Yes [ ] (b). No [ ]

4.9 The activities quiz, survey and discussion activities encourage students to utilize the eLearning Portal the more.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

5.0 Challenges in using Moodle

5.1 The process of logging unto the ELearning Portal is very easy.

a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

5.2 What features of the Moodle/eLearning Portal do you find user friendly?

5.3. The Moodle/ eLearning portal is very efficient when it comes to submitting your assignments and tests.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

5.4 How do you find your lecturer's way of presenting lessons?

5.5 The interaction time with lecturers as well as your fellow students on the eLearning portal/Moodle platform is very encouraging.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

5.6 The lecturers' instructions for tasks placed on the eLearning portal are clear and easy to understand.

(a.) Strongly agree [ ] (b). Agree [ ] (c). Neutral [ ] (d). Disagree [ ]

(e). Strongly Disagree [ ]

5.6.1. If you disagree in 5.6, what do you think should be done to make the instructions clear and easy to follow?

5.7. Given an opportunity to choose a preferred mode of learning between Moodle/eLearning platform and traditional classroom interaction, which one would you prefer and why?

5.8. What would you recommend should be done to improve the usefulness of the Moodle/eLearning platform to enhance the learning process?

The end.

Thank you for your time

Appendix C: Information and consent form for eLearning Coordinator/IT Personnel

Title: An assessment of students' perspective on the usefulness of Moodle at ZCAS University**.**

Section A: Information Sheet (for men and women>18years old)

My name is Dubeka, Buumba Muntanga. I am pursuing a Master of Library and information Science at the University of Zambia in the School of Education. You are requested to participate in this study which is looking at the students' perception of the usefulness of Moodle Learning Management System at ZCAS University.

By being a ZCAS University student, you meet the entry criterion and you have been randomly selected to take part in the study. The study will involve answering a few background questions and other questions that will help you to get an understanding on your perspective on the usefulness of Moodle at ZCAS University. Please feel free to contact or ask me to clarify any words or phrases you may not understand.

Purpose of the study

The purpose of the study is to assess students' perspective on the usefulness of Moodle at ZCAS University.

Type of Study Intervention

The study involves providing responses to questionnaires that will be administered to you.

Participant Selection

You are being asked to take part in this study because you are a student at ZCAS University and use the Moodle platform. The study would like to get your views on how you view its usefulness and also on any changes that may need to be done to improve your learning experience.

Voluntary Participation

It is entirely voluntary to participate in this study. You can decide whether to take part or not and if you choose not to part, nothing will be done to you. You may also decide to change your mind by stopping to respond during the process.

Procedures

You are invited to take part in this study by responding to a questionnaire. If you do not wish to answer

any question, you may skip and move to the next. The information recorded is confidential and your name will not be included on the questionnaire.

Risk and discomfort

If you are free to not answer any question or take part in the study if you the question(s) make you uncomfortable.

Reimbursements

This study does not offer any incentive.

However, your taking part in the study will help to give an understanding on your views and how the Moodle platform could be improved to enhance your learning experience.

Confidentiality

All information provided during the study will be kept confidential. No one apart from the Principal Investigator will be able to see the collected information and there will be no use of names on the questionnaires.

Sharing of Results

The results from this study will be shared to the Moodle administrators at ZCAS University. Confidential information will not be shared.

Right to Refuse or Withdraw

You are free to withdraw from the study or refuse to take part in the study. There is no negative effect associated with withdrawing or not taking part in the study.

Who to Contact

If you have any questions, you may ask now, during or after the study has started. Kindly contact me on:

Cell- +260977344797 or Email- dubekabumba2@gmail.com

This proposal or protocol has been reviewed and approved by HSSREC which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact:

Dr. Jason Mwanza Chairperson, Humanities and Social Sciences, Research Ethics Committee,

University of Zambia

P O Box 32379

LUSAKA

OR

Professor Henry M. Sichingabula Director, Directorate of Research and Graduate Studies

University of Zambia

P O Box 32379

LUSAKA.

Part II: Certificate of Informed Consent

I have been invited to participate in a study on the assessment of students' perspective on the usefulness of Moodle at ZCAS University. I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Name of Participant_____

Signature of Participant _____

Date _____

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the participant.

Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Contact for questions.

Principal Investigator

Names: Dubeka, Buumba M.

Phone: +260977344797

E mail:dubekabumba2@gmail.com

Appendix D: Semi-Structured Interview guide for Students

The University of Zambia

Directorate of Research and Graduate Studies

School of Education

Department of Library and Information Science

1. Do you know the e-Learning platform called Moodle used at ZCAS for teaching and learning?
2. Is Moodle eLearning platform useful to students?
3. How do you use the same Moodle in your academic work?
4. For how long have you been using Moodle?
5. Explain how Moodle assists students in BBA programme to learn?
6. Where did you train and oriented on how to use Moodle e-learning platform?
7. Please share your experiences of the orientation.
8. Do lecturers have time to follow the evolution of the work done?
9. Do you have any problem with lack of teaching and learning materials?
10. Do students generally participate in using Moodle?
11. If NO, explain how students refuse to use Moodle?
12. How is the system reliability in terms of access, congestion and internet connectivity?
13. Do students have access to Wi-Fi or any internet bundle?
14. In case of any challenges which people assist you to get on site and do business?
15. Which features of Moodle do students find easy?
16. Which features of Moodle do students find challenging to use on the portal?
17. Do you report challenges you face when using Moodle?
18. How long does it take for challenges to be worked upon?
19. Do you receive any prompt feedback on student experiences using the Moodle/eLearning portal? If yes, what sort of feedback?
20. Do you have any suggestions on improvements (if any) that could be made to the Moodle platform to enhance teaching and learning?

Appendix E: Permission to conduct research at ZCAS University

Dubeka, Buumba M.
University of Zambia
School of Education
Department of Library and Information Science
Lusaka.

The Registrar
ZCAS University
P.O Box 35243
Lusaka

31st July 2020.

Dear Madam,
RE: PERMISSION TO CONDUCT RESEARCH

I am a Librarian by profession and I am currently a student at the University of Zambia pursuing a Master's Degree in Library and Information Science. I am would like to carry out a research on the Students' Perception of the Usefulness of the Moodle Learning Management System (LMS). I wish to distribute questionnaires to students and conduct one to one interviews with the IT Personnel managing Moodle to enable me have an understanding on their views about the LMS. I am therefore seeking permission to conduct my study in your institution. It is hoped that the findings of the study would be used to make recommendations to enhance the teaching and learning experience of the students. I assure you that the data collected will be treated with utmost confidentiality and used only for academic purposes.

I thank you in advance.

Yours sincerely,

Dubeka, Buumba Muntanga.

Computer #: 2018261142.

Appendix E: Research and ethical clearance

THE UNIVERSITY OF ZAMBIA
DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

RESEARCH DEPARTMENT

APPROVAL OF STUDY

9th September, 2020

REF NO.HSSREC-2020-SEP-001

Dubeka Buumba Muntanga
LUSAKA.

Dear Ms. Dubeka,

RE: "ASSESSMENT OF STUDENTS' PERSPECTIVE ON THE USEFULNESS OF MOODLE LEARNING MANAGEMENT SYSTEM AT ZCAS UNIVERSITY"

Reference is made to your protocol dated 1st September, 2020. HSSREC resolved to approve this study and your participation as Principal Investigator for a period of one year.

REVIEW TYPE	**ORDINARY REVIEW**	**APPROVAL NO. HSSREC-2020-SEP-001**
Approval and Expiry Date	Approval Date: 9th September, 2020	Expiry Date: 8th September, 2021
Protocol Version and Date	Version - Nil.	8th September, 2021
Information Sheet, Consent Forms and Dates	• English.	To be provided
Consent form ID and Date	Version - Nil	To be provided
Recruitment Materials	Nil	Nil
Other Study Documents	Questionnaire.	

Number of Participants Approved for Study		

Specific conditions will apply to this approval. As Principal Investigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

Conditions of Approval

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.

- All unanticipated or Serious Adverse Events (SAEs) must be reported to HSSREC within 5 days.

- All protocol modifications must be approved by HSSRECprior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.

- All protocol deviations must be reported to HSSRECwithin 5 working days.

- All recruitment materials must be approved by HSSRECprior to being used.

- Principal investigators are responsible for initiating Continuing Review proceedings. HSSRECwill only approve a study for a period of 12 months.

- It is the responsibility of the PI to renew his/her ethics approval through a renewal application to HSSREC.

- Where the PI desires to extend the study after expiry of the study period, documents for study extension must be received by HSSRECat least 30 days before the expiry date. This is for the purpose of facilitating the review process. Documents received within 30 days after expiry will be labelled "late submissions" and will incur a penaltyfee of K500.00. No study shall be renewed whose documents are submitted for renewal 30 days after expiry of the certificate.

- Every 6 (six) months a progress report form supplied by The University of Zambia Humanities and Social Sciences Research Ethics Committee as an IRB must be filled in and submitted to us. There is a penalty of K500.00 for failure to submit the report.

- When closing a project, the PI is responsible for notifying, in writing or using the Research Ethics and Management Online (REMO), both HSSREC and the National Health Research Authority (NHRA) when ethics certification is no longer required for a project.

- In order to close an approved study, a Closing Report must be submitted in writing or through the REMO system. A Closing Report should be filed when data collection has ended and the study team will no longer be using human participants or animals or secondary data or have any direct or indirect contact with the research participants or animals for the study.

- Filing a closing report (rather than just letting your approval lapse) is important as it assists HSSRECin efficiently tracking and reporting on projects. Note that some funding agencies and sponsors require a notice of closure from the IRB which had approved the study and can only be generated after the Closing Report has been filed.

- A reprint of this letter shall be done at a fee.

- All protocol modifications must be approved by HSSREC by way of an application for an amendment prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address or methodology and methods. Many modifications entail minimal risk adjustments to a protocol and/or consent form and can be made on an Expedited basis (via the IRB Chair). Some examples are: format changes, correcting spelling errors, adding key personnel, minor changes to questionnaires, recruiting and changes, and so forth. Other, more substantive changes, especially those that may alter the risk-benefit ratio, may require Full Board review. In all cases, except where noted above regarding subject safety, any changes to any protocol document or procedure must first be approved by HSSREC before they can be implemented.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

On behalf of HSSREC, we would like to wish you all the success as you carry out your study.

Yours faithfully,

Dr. J. Mwanza

Dip. Clin. Med. Sc., BA.M.Soc., PhD

CHAIRPERSON
THE UNIVERSITY OF ZAMBIA HUMANITIES AND
SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE - IRB

cc**:** Director, Directorate of Research and Graduate Studies
Assistant Director (Research), Directorate of Research and Graduate Studies
Assistant Registrar (Research), Directorate of Research and Graduate Studies