Students' Perceptions of Utilisation of Open Distance and eLearning (ODeL) delivery mode: A study of selected Malawian Public Higher Education Institutions (HEIs)

By

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A thesis submitted to the Faculty of Education in partial fulfilment of the requirements for the degree of Master of Education in Leadership and Management

At

Mzuzu University

August, 2023

DECLARATION

Declaration by the Candidate:

I hereby declare that this thesis is my original work and has not been presented for a degree in any other University. No part of this thesis may be reproduced without the prior written permission of the author and/or Mzuzu University.

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ACKNOWLEDGEMENTS

Firstly, let the name of the Lord Our God be exalted now and always for the divine guidance in my life in general and in my career path. Secondly, I wish to extend my sincere and profound gratitude to the Course Coordinator, my lecturers, friends and family as my academic journey has been filled with caring, creative individuals who inspired and supported me along the way. Thirdly, I wish to extend my gratitude to my supervisor, Dr. Paxton Zozie for the continuous support of my Masters study and research, his patience, motivation, enthusiasm, and immense knowledge. His invaluable role and guidance in this work, encouragement, along with the useful feedback helped this study to take a more focused direction throughout the time of research and writing of the thesis.

My singular gratitude is equally accorded to the management, staff and students of all the higher education institutions (HEIs) in Malawi that participated directly in the study, granting access and privilege to talk to key informants. Without their cooperation this research would not have been possible. My sincere appreciation also goes to the Mzuzu University Research and Ethics Committee (MZUNIREC) for granting ethical clearance to undertake the research in Malawi.

In a special way, I wish to profoundly appreciate my husband, Dr Michael Bennett Sepula, for everything he has done to help me reach this goal. I appreciate his immense provision as my sponsor who provided continued moral and financial support over my Master's Degree studies at Mzuzu University. The support provided has enabled me to accomplish one of the life time and greatest desired academic dreams. The studies have made me better equipped, more conversant and well informed on pertinent needs and recurrent issues in the education sector in Malawi.

DEDICATION

This thesis is dedicated to my dearest parents, the late Mr. Joseph Gama, and Mrs. Monica Mpangira Gama, my father and mother, respectively, for the sacrifices they made in ensuring that as a girl child I receive an education from childhood. Their unfaltering support, guidance and pieces of advice are very much appreciated as they have contributed to what I have achieved to date and yet to achieve in future. This level of academic achievement could not have been possible had it not been for their inspiration and encouragement along the way.

ABSTRACT

Open Distance and eLearning (ODeL) is considered one of the key educational tools responding to the need for and importance of a structured and systematic approach to education transformation in higher education. ODeL has been associated with poor planning and limited local expertise at institutional level in Malawi since the institutions were primarily established to serve the face-to-face delivery mode, or are not adequately adapted to suit ODeL needs among different stakeholders. This study therefore, sought to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public Higher Education Institutions (HEIs) as a way of adding a "student voice" to the ODeL discussion. Placing the study within the context of discussion was the systems theory. Using purposive and convenience sampling techniques, data were collected from a sample of 189 respondents, which comprised of 183 Students and 6 ODeL Centre Managers in the two selected public HEIs main and satellite centres. The main data collection techniques used in the study were online survey, focus group discussions (FGDs) and semi-structured interviews. The study employed a mixed methods approach. The quantitative and qualitative data collected were analysed using descriptive statistics in SPSS and thematically using NVivo, respectively. The study findings revealed that students have varied perceptions of institutional level characteristics and context that are required to facilitate ODeL student learning in the HEIs. The results further revealed that students' have high perceptions of the quality and relevance of student support services. Further, the findings show that ODeL has a potential for growth as it is perceived as being underutilised as evidenced by the successes, opportunities and lessons that have been learnt thus far in its implementation in spite of the individual, instructional and institutional challenges that

are being faced. The study findings have implications on how to enhance the lessons learnt over time to inform interventions for improved student experiences in ODeL utilisation in the HEIs. The findings also highlight the mandate that the National Council for Higher Education (NCHE) which was established by NCHE Act (2010) has to fulfil in ensuring that higher education system in Malawi is well regulated. It is anticipated that the study will inform legislation that govern establishment and administration of ODeL delivery mode and inform best practices in ODeL in the HEIs from the students' perspective.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

DE   Distance Education

FGD   Focus Group Discussion

GoM   Government of Malawi

HEI   Higher Education Institution

ICT   Information Communication Technology

LMS   Learning Management System

ODeL   Open Distance and eLearning

ODL   Open and Distance Learning

SADC   Southern Africa Development Community

DEFINITION OF OPERATIONAL TERMS

Blended mode: Blended learning, also known as hybrid learning, technology-mediated instruction, web-enhanced instruction, or mixed-mode instruction, is an approach to education that combines online educational materials and opportunities for interaction online with traditional place-based classroom methods (Porter *et al*., 2014).

Characteristic: a typical or noticeable quality of someone or something (Cambridge Dictionary).

Distance Learning: Distance learning is the kind of education that is conducted beyond physical space and time and is aided by technology. Online educational tools allow students and instructors to interact synchronously or asynchronously and give endless training opportunities with distance learning courses or hybrid courses (Cosmas & Mbwette, 2009).

Dual mode: Dual-mode refers to universities that can give instructions in the conventional classroom that is face to face, and it can also give instructions on open and distance learning (Camilleri & Camilleri, 2021).

Higher Education Institution: comprises all post-secondary education institution of learning, training and research guidance that are authorised to offer higher education by state authorities (UNESCO).

Institution: an organization founded for religious, educational, professional, or social purpose (Oxford Dictionary).

Institutional characteristics: these are basic values and arrangement of institutions that are relatively permanent in their structure (Cambridge Dictionary).

Institutional context: refers to the character, programs, funding opportunities, and informal or formal support for engagement activities that will undergird the ability to create a strong engagement program in the institution (Hiram *et al*., 2012).

Interventions: the action of becoming intentionally involved in a difficult situation, aimed at changing a process or situation in order to improve it or prevent it from getting worse (Cambridge Dictionary).

Open Distance and eLearning: Any learning activities within formal, informal, and non-formal domains that are facilitated by information and communication technologies to lessen distance, both physically and psychologically, and to increase interactivity and communication among learners, learning sources and facilitators (Bozkart *et al*., 2019).

Open Learning: The term " open learning " is used to describe learning situations in which learners have the flexibility to choose from a variety of options in relation to the time, place, instructional methods, modes of access, and other factors related to their learning processes (Bozkart *et al.*, 2019).

Online Learning: also referred to as e-learning, online learning or electronic learning, is the acquisition of knowledge which takes place through electronic technologies and media. In simple language, e-learning is defined as "learning that is enabled electronically" (Richardson *et al*., 2017).

Perceptions: the way in which something is regarded, understood, or interpreted (Oxford Dictionary).

Public universities: are those that get funding and support from the government (studyinthestates.dhs.gov).

Quality: the degree to which an entity's process, product or service satisfies a specified set of distinctive attributes or requirements (Oxford Dictionary).

Relevance: the degree to which something is related or useful to what is happening or being talked about (Oxford Dictionary).

Student: a person who is enrolled and studying at a university or other place of higher education (Oxford Dictionary).

Student experiences: how a person who is studying at a university or other place of higher education perceive interactions with their institution in all aspects including student living, academic studies, social interactions and general campus life (Breen, 2014).

Student support: also called student support services includes academic and other related activities responsive to the needs and accessible to the students as the most vital component of ODL system to help students develop and achieve success (Chattopadhyay, 2014).

Technology: is an umbrella term that describes communication, information and technological tools used to enhance learning, teaching and assessment. This may involve computer-based learning or multimedia materials used to supplement in-class activities providing students access to countless online resources, encouraging them to carry out research and therefore become more independent (Online Business School).

Utilisation: the act of using something in a practical and effective way (Oxford Dictionary).

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Online learning is not a novel discovery. The past forty years have seen rapid advances in the introduction of online university degrees, dating as far back as 1980s, with optimal maturation time for online education evident in 1990s and 2000s. Since the beginning of the 21st century, online learning has become entrenched in higher education worldwide (Kasim & Khalid, 2016; Zawacki-Richter *et al*., 2015). Arguably, it is apparent that the provision of education through traditional face-to-face delivery mode is becoming difficult and inadequate due to limited space, financial constraints, inadequate teachers and emergencies according to the Draft Malawi ODeL Policy (2021). Besides, since it became popular, online education has regularly been viewed from the perspective of a good-to-have alternative (Adedoyin & Soykan, 2020) to contribute significantly to the realization of equitable access while enhancing quality of education, which have been challenges over decades.

Considering the growing capacity of the need for a relevant, sustainable and value contributing distance education, The UNESCO 'Education 2030 Incheon declaration: Towards inclusive and equitable quality education and lifelong learning for all' launched in 2015 (UNESCO, 2015) foresees a central role for distance education by committing to a:

> Well-established, properly regulated tertiary education system supported by technology, open educational resources and distance education that can increase access, equity, quality and relevance, and can narrow the gap between what is taught at tertiary education institutions, including universities, and what economies and societies demand (p. 13).

Consequently, the declaration gave prominence to Open Distance and eLearning (ODeL) approach which is currently being implemented in many countries worldwide by both public

and private higher learning institutions including universities. Prinsloo (2016) reports that Massive Open Online Courses (MOOCs) and Open Education Resources (OER) movement was set up to champion the greater awareness and potential of ODeL approach to education delivery. This has led to mainstream colleges and universities offering online programmes and courses than ever before.

Most of the higher educational institutions in Sub Saharan Africa, which includes Malawi, have started exploring ODeL opportunities and adopting the system, but still lack resources, making it difficult for them to utilise the program to its fullest (Kotoua & Ilkan, 2014). Malawi is a signatory to regional and international instruments, conventions and declarations in the areas of education and training. These instruments include but are not limited to Education for All (EFA), the Sustainable Development Goals (SDGs), the Universal Declaration on Human Rights (UDHR), the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW), SADC Protocol on Education and Training, SADC Regional (Open and Distance Learning (ODL) Policy Framework, SADC Regional ODL Strategic Plan, Commonwealth Learning Strategic Plan, and the Livingstone Call for Action on Social Protection (Zambia). All these instruments to which Malawi is a signatory according to the draft Malawi ODeL Policy (2021) allude to the fact that ODeL is a viable mode of learning, for increasing access to education and training, and reducing inequalities. In addition, nationally, there is the Malawi Vision 2063 (a national blueprint) which stresses on enhancing the availability of and access to education in all levels including higher education through eLearning.

ODeL as one of the instruction delivery modes has been in use in Malawi since 1965 under the Malawi Correspondence College (MCC) which focused on print-based materials, supplemented by the Schools Broadcasting Unit (SBU) of the Malawi Broadcasting Corporation through radio programmes (Draft Malawi ODeL Policy, 2021). Previously, Malawians were advancing their

education through correspondence colleges from other SADC region countries and beyond. The MCC and SBU merged in 1973 into what, later, became the Malawi College of Distance Education (MCDE) in 1987. The main objective was to provide distance education to successful primary school leavers due to limited space in secondary schools and distance in-service teacher training to allow teachers to upgrade qualifications while still on the job as stipulated in the draft Malawi ODeL Policy (2021).

Following the steps of MCDE, other public and private institutions like the then Malawi Polytechnic (now called Malawi University of Business and Applied Sciences [MUBAS]) started offering evening professional courses and Aggrey Memorial School started offering education courses, vocational and artisans training through the ODL delivery mode in 1976. The Department of Teacher Education and Development (DTED) in the Ministry of Education started training primary school teachers using the ODL delivery mode under MASTEP (1990), MIITEP (1994) and the Initial Primary Teacher Education (IPTE) in 2010. Domasi College of Education started providing a diploma in secondary teacher education through Secondary School Teacher Education Programme (SSTEP) in 2000.

Post 2000, following the spreading and integration of information and communication technology and other educational innovations, ODL morphed into Open, Distance and eLearning (ODeL). Since then, public universities started offering different professional courses through ODeL and these are the then Chancellor College (now called University of Malawi [UNIMA]) and Kamuzu College of Nursing in 2009, Mzuzu University (MZUNI) in 2011, the Lilongwe University of Agriculture and Natural Resources (LUANAR) in 2016 and the Malawi University of Science and Technology (MUST) in 2020. The developments did not escape some private universities and colleges, such as UNICAF and Malawi Adventist University who also started offering ODeL programmes and blended learning modes respectively, other public

and private universities like Catholic University also embarked on emergency remote teaching in response to COVID-19 from 2020.

Despite a good number of public and private universities and colleges adopting the ODeL delivery mode, there are challenges, opportunities and lessons that can be learnt from its utilisation. Utilisation of ODeL can significantly contribute to the realization of equitable access and improving outcomes while enhancing quality of education especially this time when provision of education through traditional face-to-face delivery mode is becoming difficult. ODeL has demonstrated great potential as a vehicle for education during calamities such as the COVID-19 pandemic, a situation that has seen many countries closing schools for a lengthy period. During the first wave of COVID-19, education service providers, including higher education institutions (HEIs) were required to follow their respective governments' preventative social distancing measures and to increase their hygienic practices, to mitigate the spread of the pandemic (Camilleri & Camilleri, 2021). As a result, educational institutions were suddenly expected to interrupt their face-to-face educational services.

Higher education institutions (HEIs) shifted from traditional and blended learning approaches to a fully virtual delivery. It is presumed that the shift ensured the building of a robust education system where learning must never stop. Consequently, the shift from traditional and blended approaches to a fully virtual delivery exposed huge gaps and opportunities that the virtual delivery mode has presented to the implementing institutions throughout the years. This is the case because of the varying degrees of management and efficiency of the programmes being offered by different universities and colleges which affect student learning and satisfaction. Such developments defeat the purpose of the requirement in the Malawi Constitution, under Chapter IV, Section 25 (3.b), which provides for rights to education and specifies that "the standards maintained by private schools or institutions are not inferior to official standards in state or public schools" (p.9). Therefore, these have satisfied the need to ensure that programmes

on offer through ODeL are inclusive and easily accessible to all students regardless of the type of the institution (public or private) where the programmes are being offered, the geographical setting of the institution and student despite integration of information and communication technology (ICT) and other educational innovations.

Against this background, it can be appreciated that while ODeL is offering students expanded choices to learn making education accessible to even larger numbers of students in Malawi, it has also created opportunities and challenges for educational institutions. Different people perceive the advantages of ODeL differently, and their perceptions have influenced attitudes towards acceptance and use of ODeL. Hence, university students' who are users of the ODeL learning mode as its consumers have different perceptions on the use of technology to learn based on their institutional experiences, understanding, opinions and attitudes towards the use of the learning mode. According to the Oxford Dictionary the term 'perception' refers to the way in which something is regarded, understood, or interpreted. (2014) indicates that the term 'perception' refers to an idea, a belief or an image one has as a result of how s/he sees or understands something. Furthermore, Kim *et al.* (2014) underscore, from the customer service management perspective, that perceptions are consumers' beliefs about the realistic performance of a service consumed or experienced, for instance, high education provision to students.

1.2 Statement of the Problem

It is evident that there is growing demand for university education calling for complementary and alternative ways of offering such education to those who qualify but cannot be enrolled into the conventional face to face programs. Adoption of ODeL as a complementary and alternative delivery mode, is catering for diverse student needs while increasing access to education and enhancing quality of education over a relatively short time. ODeL is a learner centred, technology-based education delivered at a distance, allowing equitable access to education. It

offers more flexibility and can allow flexible multiple entry and exits unlike the traditional face-to-face delivery mode. It is an increasingly important aspect of higher education because it meets the needs of an expanding pool of non-traditional students who find education necessary for jobs in today's information age.

Studies indicate that before the outbreak of COVID-19, many practitioners blended traditional learning methodologies with digital and mobile applications to improve learning outcomes (Al-Maroof *et al*., 2021; Boelens *et al*., 2018; Furió *et al*., 2015). Many authors hold the view that online technologies improve the students' experiences (Crompton & Burke, 2018; Kurucay & Inan, 2017; Sánchez-Prieto *et al*., 2017). During the pandemic, many HEIs suddenly migrated from traditional and blended teaching approaches to fully virtual and remote course delivery due to sudden unprecedented closures. On a positive note, this opened a window of opportunity for other higher education stakeholders who have fully adopted the approach after the closures. Cesco *et al*. (2021) support the assertions that some academic members of staff continue to rely on the use of remote learning technologies to teach their courses two years after the outbreak. Arguably, the integration of education technologies in higher education may be accelerated in the foreseeable future as the utilization of remote communications may increasingly become the norm, in a post COVID-19 era (Camilleri & Camilleri, 2021).

As higher education institutions are constantly pursuing more innovative ways to improve the quality of educational provision in order to remain globally competitive (Garwe, 2015), online education seems to provide an alternative avenue to accessing education with ease. Notwithstanding, Garwe (2015) argues that the current global perspectives in higher education demonstrate that incorporating the stakeholders' voice and their perceptions goes a long way in achieving this goal. The concept of "student voice" has been at the heart of modern educational thought, research, policymaking and provision in many spheres including online education. Thus, the student voice phenomenon provides students with the opportunity to reflect, actively

articulate their views and to be partners in the planning, implementation and appraisal of their teaching and learning experience (Garwe, 2015).

In Malawi, the student access rate to higher education is less than 1% due to factors related to access and equity, quality and relevance, governance and management (NESIP 2020-30). Although there has been an increase in the number of both public and private universities as a way of addressing access and equity challenges, selection into the public and some private institutions is highly competitive. The National Council for Higher Education's (NCHE) harmonised selection report of 2018 observed that less than 30% of those who qualified to be enrolled in universities had access to higher education. Coupled with this is the high cost of higher education that limits access for the needy and vulnerable students. There are also geographical constraints that put those living in urban areas at an advantage in accessing higher education over those in rural areas. According to the Government of Malawi 2021/2022 Education Sector Performance Report, it has been observed that in 2022, Malawi had enrolled 56624 undergraduate students in the universities of which 34964 and 21660 undergraduate students were enrolled in public and private universities respectively. Out of the total enrolled, 9385 were enrolled in ODeL, public and private universities had enrolled 5944 and 3441 ODeL students respectively. This implies that 17% of students in public HEIs and 16% in private HEIs are enrolled through ODeL bringing the cumulative proportion to 16.5% which provides an opportunity to increase access through non-traditional means.

Despite major strides that are being taken to embrace ODeL delivery mode in HEIs, there is dearth of knowledge owing to few studies focussing on student voice and their perceptions about this mode of delivery. Furthermore, it is argued that students utilising the ODeL delivery mode find it difficult to utilise the mode owing to dominant wide-ranging negative perceptions about the delivery mode among the general public, aggravated by limited access to the internet and internet infrastructure, intermittent electricity supply, limited access to ICT devices and low

digital literacy (Government of Malawi Draft ODeL Policy, 2021). In addition, there is poor planning and limited local expertise at institutional level that leads to a poor student orientation and support system. The draft Malawi ODeL policy advances the view that most student enrolment, assessment, support systems and staff training were developed primarily to serve the face-to-face delivery mode, or were not adequately adapted to suit ODeL needs. Subsequently, the adoption of ODeL is low, haphazard and suffers from inadequate management, leadership and financing attention, especially in dual mode institutions. As a result, the higher education system is not resilient and adaptive enough to technology, innovations, disasters or emergencies especially in taking advantage of opportunities arising, lessons being learnt and addressing challenges being faced for further development.

It is against this background that this study sought to investigate how utilisation of ODeL mode has influenced students' experiences under the different prevailing institutional and contextual conditions which the prevailing studies have partly explored. The study therefore primarily focused on students as end users of the ODeL delivery mode to inform what the program developers and providers should take into consideration when developing and offering such programs from the end user (student) perspective. At the same time, the study sought to establish whether or not online technologies have opened windows of opportunities and improved students' experiences from Malawian students' point of view despite other prevailing characteristics and contexts in the HEI's under which the mode is being utilised. Contributes towards the understanding of students' perceptions of utilisation of ODeL as a delivery mode in public HEIs in Malawi that can be applied to other countries that operate similar ODeL systems under similar prevailing conditions. Specifically, the study sought to address the gap on perceptions that students have on the utilisation of the ODeL delivery mode in Malawian selected public HEIs pre, during and post COVID-19 closures.

1.3 Purpose of the Study

To investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public higher education institutions.

1.4 Specific Objectives of the Study

The specific objectives of the study are:

1. To establish institutional level characteristics and context of ODeL utilisation that facilitate student learning in higher education institutions.
2. To assess quality and relevance of ODeL student support systems in higher education institutions.
3. To identify successes, challenges, opportunities and lessons learnt in student ODeL mode utilisation in higher education institutions.
4. To establish interventions for improved ODeL student experiences in higher education institutions.

1.5 Theoretical and Conceptual Framework for the Study

1.5.1 The Theoretical Framework

A theoretical framework is an examination of the existing or self-formulated theories that are related to the research objectives (Serem, Boit & Wanyama, 2013). In the current study a re-examination of an already existing theory has been used to explain and predict trends in light of emerging issues. Therefore, the study was largely informed by the systems theory in order to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public HEIs.

The idea of general systems theory was originally advanced by Von Bertalanffy in the 1930s and after the Second World War (Bertalanffy 1972; Adams, Hester, and Bradley, 2013;

Friedman & Allen, 2014). According to Mele *et al*. (2010), the systems theory is an interdisciplinary theory about every system in nature, in society and in many scientific domains that provides a framework to investigate phenomena from a holistic approach. A system therefore denotes a set of parts that are interrelated so as to function as a whole in order to achieve a common purpose (Mwangeka, 2020). For example; school organizations with all their institutional components are systems that make them function as a whole (Bozkus, 2014). A system is composed of a whole unit, made up of interacting parts, and therefore, systems scientists in both the natural and social sciences study the interaction between parts to better understand the complexities of reality (Lalande & Baumeister, 2015). Arnold and Wade (2015, p.7), further define a system as, "groups or combinations of interrelated, interdependent, or interacting elements forming collective entities". In the case of a university, this may be the whole institution, academic division or department. Universities which are school systems are among the oldest existing organisations (Pfeffer & Stichweh, 2015). Martin (2019) posits that higher education systems must constantly adapt and evolve to ensure survival in response to ever changing system dynamics.

All organizations are open systems that interact with their environment to survive. Systems are unpredictable since they observe the operating environment, generate information and make changes based on these observations influencing contextual and characteristic variations. This study, therefore, was based on the systems theory since ODeL systems in public HEIs operate as independent systems or subsystems within a larger system with its own characteristics and operational context influenced by the prevailing environmental factors. Additionally, ODeL systems within the HEIs have been established in response to environmental changes like increased demand for high education and emergent especially COVID 19. Hence, ODeL can operate as a purely single system, a system within another system, operating as a hybrid -

blended or dual mode and a system responding to environmental changes, operating as emergency remote learning (Camilleri & Camilleri, 2021).

The systems theory is analogous to the education production function. The basic system theory of organizations is made up of five major components: inputs, a transformation process, outputs, feedback, and the environment (Daft, 2010). According to John (2010), education has a high-priority function in the production of human resources, and that the production function is a relationship between the amount of input and intervening factors to produce a certain good, with consideration to its quality. In this theory, inputs encompass the material, human, financial, or information resources required to produce goods and services of varied quantities and qualities. The transformation process involves the application of production technology by management to change the inputs into outputs. The outputs are the tangible products and services of the organization that possess a market value or user utility. In the case of ODeL, technological developments have provided flexibility to students using industrialised systems and procedures, hence is considered an unusual form of learning since it breaks up the process of interaction and communication as it relies on electronic devices for interpersonal communication which influences changes in teaching and learning behaviours. This has affected inputs, services, outputs and user utility in ODeL delivery.

Vancouver (1996) in his extended theory of living systems, identified organizations and societies as part of the systems and further postulated that despite irregularities in the system's environment, the systems are able to maintain their own regularity. This suggests that, environmental disorders do not necessarily disrupt the functioning of systems. But recently, it has been observed that despite HEIs and ODeL systems operating systematically in their procedures and are systemic in their approach (Gibson, 1993) with emphasis on structured, planned, institution-based instruction, environmental disorders specifically the COVID 19 pandemic has affected how the systems operate. Additionally, ODeL which is supported by

technology, open educational resources and distance education (Prinsloo, 2016) with a logical and gradual sequence of operations or activities, has experienced changes leading to operational complexities displaying functional differentiation affecting students' perceptions in the process.

In terms of user utility, the separation of students in time and space from fellow students, content, facilitators and the system has brought in a sense of isolation. In this case, students realise that they have new responsibilities which were not seen in the pre-industrialised education system. Therefore, the study assessed quality and relevance of ODeL student support systems which is a subsystem of the ODeL system in higher learning institutions and their influence on student perceptions of the ODeL delivery mode based on their interaction and communication with fellow students, instructors and content within the system.

1.5.2 The Conceptual Framework

The conceptual framework for this study (Figure 1.1) elaborates the research problem in giving illustrative interconnections in a schematic diagram of key ideas and constructs in the research approach in relation to the research objectives. The conceptual framework graphically presents the features of ODeL delivery mode and depicts how the concepts relate to utilisation of ODeL.
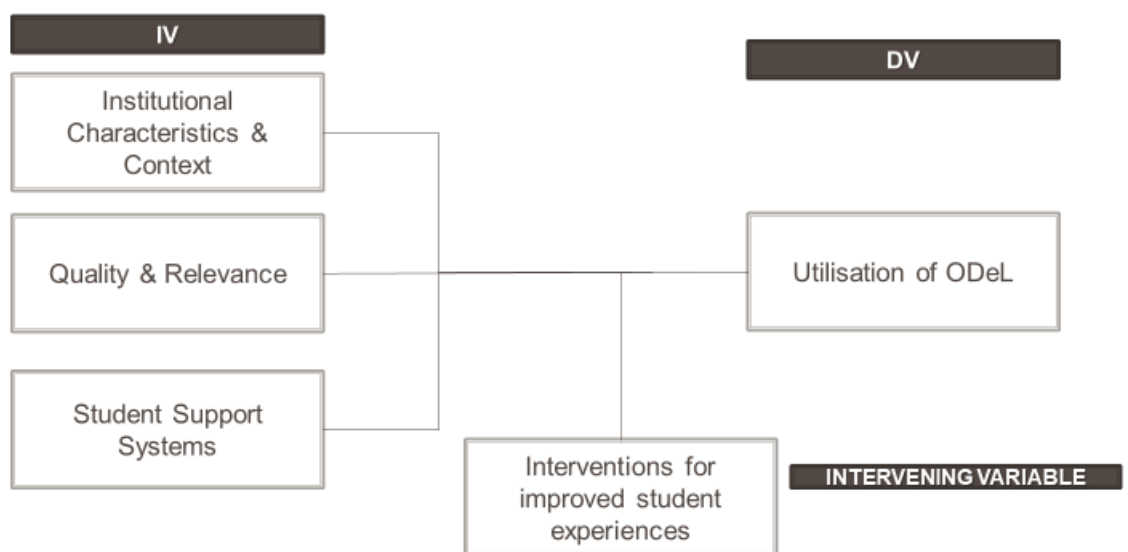
Figure 1.1**:** Conceptual Framework

As in Figure 1.1 the research approach used in this study identified three interrelated independent variables, that are features of ODeL delivery mode that can influence students' perceptions of utilization of ODeL. These variables are; institutional characteristics, quality and relevance, and student support systems. These variables are central aspects of the study since they can contribute to utilization of ODeL (dependent variable) resultant from use of interventions for improved student experiences (intervening variable) in the HEIs.

The Theoretical Framework and Conceptual Framework (Figure 1.1) are linked and have informed the development of the research objectives. The Theoretical framework highlights the existence of interacting parts that are interrelated in a system so as to function as a whole in order to achieve a common purpose. In the Conceptual framework the interacting parts are the independent variables that influence the utilisation of ODeL (dependent variable) resulting from interventions for improved student experiences (intervening variable). The systems theory also highlights inputs and application of production technology by management to change the inputs into outputs. The independent variables in the conceptual framework could be considered inputs, the transformation process, interventions for improved students experiences (For example, use of technology) and the output being user utility in ODeL delivery. The systems theory posits that higher education systems must constantly adapt and evolve to ensure survival in response to ever changing system dynamics. Systems are unpredictable since they observe the operating environment, generate information and make changes based on these observations influencing contextual and characteristic variations. Therefore, as systems exist, interventions for improved experiences keep on responding to the changes in the environment as presented in the conceptual framework.

1.6 Scope of the Study

The purpose of the study was to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public higher education institutions.

Specifically, the study sought first, to establish institutional level characteristics and context of ODeL utilisation that facilitate student learning in HEIs. Second, the study sought to assess quality and relevance of ODeL student support systems in HEIs. Third, the study sought to identify successes, challenges, opportunities and lessons learnt in student ODeL mode utilisation in HEIs and last, it sought to establish interventions for improved ODeL student experiences in HEIs.

Hence, the study focused on Open Distance and eLearning being offered by HEIs in Malawi which, with the dawn of technology, and mainstreaming of innovation, brings more anticipation for enhanced efficiency in the delivery and transformation of education. The study focused on public HEIs that have used or are still using ODeL delivery mode in all its forms. The study targeted a sample of public HEIs whose students have or are utilising ODeL delivery mode across Malawi since the institutions are spread out across the country while paying attention to the diversity of students enrolled in ODeL.

Furthermore, the respondents of the research were drawn from the selected public HEIs across the country. The respondents included former and current students and ODeL Centre Managers. The data were collected between May and July 2022.

This study aimed to reduce the existing gap in the literature on students' perceptions and attitudes towards distance education in Malawian public HEIs specifically, and Malawi in general, and provide useful and practical information to ODeL education designers and providers.

CHAPTER 2: LITERATURE REVIEW

2.0 Overview

This literature review has been presented to document or justify the importance of the research problem (Shelden *et al*., 2010) by relating it to other previous studies. The interest was to establish whether the findings of the study support or modify existing ideas and practices advanced in the literature. Or alternatively the study could possibly expand the understanding of ODeL delivery mode and consequently give an understanding of the factors that influence student perception in ODeL utilisation. Therefore, the chapter discusses the literature on perceptions on ODeL delivery from previous studies to draw lessons as well as identifying gaps from existing research to either document or justify the importance of the research problem.

2.1 Open Distance and eLearning in Malawi

Open Distance and eLearning (ODeL) can be defined as any learning activities within formal, informal, and non-formal domains that are facilitated by information and communication technologies (ICT) to lessen distance, both physically and psychologically, and to increase interactivity and communication among learners, learning sources and facilitators (Bozkart, 2019).The use of technologies for teaching and learning presents an exciting future of education in Malawi calling on institutions that have been offering and those that intend to offer education and training through ODeL to embrace it and exploit its expansive potential.

The Ministry of Education, Science and Technology established the Directorate of Open, Distance and e-Learning mandated to create an enabling environment where education technology will flourish, and access improved, through various open and flexible teaching and learning systems. Evans (2003) contends that distance education (especially when offered virtually) is heavily influenced by government policies and by educational policy and policy changes within education (Harry, 1999; Perraton & Lentell, 2003). At the same time, it is

15

necessary to recognize that, although these policies may seem to be about open and distance education, in effect, they are really about what open and distance education can contribute to fixing, solving, or addressing some social, economic or educational problem or need in a country (Haughey & Roberts, 1996; Jakupec, 1996; Johnson, 1996). In Malawi, ODeL seeks to specifically address the existing access problems especially for those students who cannot afford to enrol in the traditional education due to limited spaces in the institutions hence in tandem with the recognition that it seeks to contribute towards fixing social, economic and educational problems even though no policy exists to guide its establishment and operations. This contends with Evans (2003) who indicates that an open and distance education organization, especially those that operate in the most locally disconnected, flexible and virtual ways, arguably is more vulnerable to changes in government policy including operating environment changes too. However, what can be considered as a vulnerability in one sense is also their strength in another, in that they can take advantage of their more fluid environments to respond to demands, needs and opportunities with more freedom than their traditional counterparts.

The fluidity in responding to demands and needs was visibly recognised during the COVID-19 period. During the pandemic, many HEIs migrated from traditional and blended teaching approaches to fully virtual and remote course delivery (Camilleri & Camilleri, 2021) in adapting to an unprecedented situation Malawi inclusive based on the then government policy. COVID-19 triggered them to solely use these remote technologies to engage in two-way communications with their students (Aguilar, 2020) which was a sudden change from the traditional way which institutions were used to. This development resulted in both challenges and opportunities to students and educators (Howley, 2020; Araújo *et al*., 2020), Malawian students and educators inclusive. However, since the pandemic, there have been a number of discursive publications about the impacts of COVID-19 on higher education, in other

developing countries, few of which, are empirical studies on the subject (Aguilera-Hermida, 2020; Bergdahl & Nouri, 2020; Gonzalez *et al*., 2020). While these other studies looked specifically at the COVID 19 period and other developing countries, this study recognized the need to focus on ODeL utilisation before, within and after that period within Malawi HEIs as a way of making more contribution to general ODeL utilisation.

2.2 ODeL Policy in Malawi

Currently, Malawi is in the process of developing a policy on ODeL in response to the National Education Policy (NEP, 2016) and the National Education Sector Investment Plan (NESIP 2020-2030). The ODeL policy is aimed at creating an enabling environment for both public and private HEIs to be systematic and realistic in providing education and training through the ODeL delivery system. Hence, ad hoc provision of education and training programmes through ODeL remains the order of the day in the country. This also attests to the lack of harmonisation in the way HEIs offer ODeL in their respective institutions. As such it can be assumed that students' perceptions of the systems in the respective institutions are different. Panda (2003) designates that irrespective of variations in provision and organization of distance learning, both government and institutional policies on placing distance education at either the centre stage or the periphery of educational planning are heavily influencing distance education planning and reforms. Hence, Panda (2003) suggests that governments should determine the comparative merits and limitations of single mode and dual mode distance education before undertaking policy initiatives. Consequently, it is worthwhile recognising that even though Malawian public universities offer distance education in a dual mode, policy initiative could focus on both, as single mode could be a way to go in the foreseeable future.

Prinsloo (2016) indicates that it is also crucial to remember that distance education has traditionally been seen by policy makers and regulatory bodies to optimise economies of scale

resulting in reduced costs, without necessarily recognising the cost of additional support needed by students and staff due to the widened access (Hülsmann, 2016; Rumble, 2014). Students can study on their own time, at the place of their choice (home, work site or learning centre), and without face-to-face contact with a teacher. A study by Porter *et al.* (2016) argues that majority of African students might access internet and related education content on their mobiles anywhere, anytime which is in contrast with Malawian students. ICT facilities and resources have always been an issue and a tremendous challenge for the students since there is still a huge gap between urban and rural students in terms of Internet connection and network resources. In Malawi ICT facilities and network connection are mostly available in urban areas at the learning centres such that students have to travel to the learning centre to study. Hence, the study recognises that technology access and use is a critical element of distance education in developing countries. While Msweli (2012) argues that the definition of ODL differs depending on geography and institution, Bozkurt (2019) states that due to changes over time on the basis of digital transformation, the ODeL delivery system in today's paradigm, the word *distance* represents psychological or transactional distance rather than physical or geographical distance in contrast to earlier assumptions. Confirming this, Bates (2005) argues that distance is more likely to be psychological or social, rather than geographical, in most cases. Consequently, this gives a challenge to distance educators to balance accessibility, relevance and quality concerns in designing and delivering education technologically for improved teaching and learning through student engagement.

The issues surrounding quality of distance education have been discussed and debated by many different parties leading to ODL quality confusion to some stakeholders (Messi, 2014) students inclusive. Ojo & Olakulehin (2006) posits that more often than not, perceptions of the distance learning system in the instructional process is influenced by an individual's beliefs about the advantages of distance education, for himself, as a student (as the user), as an employer (whose

employees are also distant learning students), or as an educational planner (desirous of providing potent solutions to educational problems). This entails that a keynote of distance education is that its developers and providers see the world of learning and teaching from the point of view of the learner. They may express the centrality of the learner in the process of education (learning and teaching) in different ways; hence focusing more on the process rather than the outcome. However, they agree that learning is a personal and individual act, with the instructor playing a key role in facilitating learning (Saba, 2016) rather than relying merely on technology. Hence as the policy is being developed there is need to engage students as stakeholders, look into harmonisation of the system, provision of technology, and accessibility, relevance and quality concerns in ODeL among other things.

2.3 Models of ODeL in Malawi.

There are three types of institutions under which ODeL operates in Malawi: the purposely-operating distance education institutions that are purely single system (open universities), those operating as a system within another system either as a normally designed hybrid-blended or a dual mode system responding to environmental changes, and those operating as emergency remote learning. While the structure and organization of these subsystems differ considerably for these different models of distance education and training, it is anticipated that planning, management and administration and student support services are different in these different ODeL subsystems hence affecting student perceptions in different ways. Powar (2003) also mentions that the distance education system is polycentric having a number of subsystems with different functions, requirements and responsibilities, and that their different administrative and academic units are spatially separated rendering their management relatively complex. Panda (2003) argues that while open universities have benefited from considerable autonomy, dual-mode distance education institutions have been subservient to the policy of the conventional university. These anticipated differences and possible similarities in the planning,

administration, management and offering of student support services in the institutions were the ones that informed the study. The institutions under study are public dual-mode distance education institutions hence the study addresses the gap that exists in studying such type of institutions.

2.4 Student Support Systems

In the reviews of several models of distance education, Powar *et al*. (2000) have, for instance, recognized subsystems relating to administration and management, development of learning materials, production and distribution of learning materials, and student support services as constituent units of an open university. Good distance learning courses result from institutions that provide quality learner support systems via effective communication for students and instructors (Messi, 2014). Student support systems as a constituent unit of a university can be explored based on the view that it influences student experiences as it can affect student satisfaction, retention and learning (Gabelnick, MacGregor, Matthews, & Smith, 1990c; Kember, 1989; Kowch & Schwier, 1997; Powers & Mitchell, 1997). In that respect, elements of student support systems that were reviewed in the literature are: technology, institutional support and interaction, and communication.

2.4.1 Use of Technology

It has been suggested that information and communication technologies (ICTs) play a number of roles in education (Jaffer *et al*. 2007). These include providing a catalyst for rethinking teaching practice (Flecknoe, 2002; McCormick & Scrimshaw, 2001); developing the kind of graduates and citizens required in an information society; improving educational outcomes (especially pass rates) and enhancing and improving the quality of teaching and learning (Wagner, 2001; Garrison & Anderson, 2003). With independent online learning, research findings indicate a gap between the assumptions of the developers and providers of the learning

initiative, software or training and students' opinions (Gros, 2001). This gap between the assumption of developers including service providers and users (students) needs to be addressed through this kind of study. Simultaneously, it needs to be recognised that choices for using Information and Communication Technologies (ICTs) in education are based on technological possibilities rather than educational needs. In developing countries like Malawi where higher education is fraught with several challenges, there is increasing pressure to ensure that technological possibilities are viewed in the context of educational needs (Jaffer *et al*. 2007). Distance education is a developing field in some developing countries and is emerging as a significant component of life-long training. This is evidenced by the number of distance education programmes currently operating in these countries ranging from secondary education, teacher training, and vocational education to higher education. So far in Malawi the programmes range is within teacher education and higher education rendering it a new phenomenon to students transitioning from secondary to higher education.

Students' previous experiences and common media usage behaviour (O'Brien & Verma, 2019; Zawacki-Richter *et al*., 2015), or their skills for the use of digital (communication) media (Hong & Kim, 2018) might impact students' experience of and engagement in digital learning (Kim *et al*., 2019). Of importance are aspects of digital (in)equality with respect to the availability of technology and the skills needed for its effective use; as are, for example, spaces that offer an appropriate learning atmosphere (Beaunoyer *et al*., 2020; Li & Lalani, 2020; Tam & El-Azar, 2020). In previous studies it has been established that students seem to be a little less satisfied with online courses and slightly prefer face-to-face courses (Allen *et al*., 2002; Israel, 2015; Tratnik *et al*., 2019) while similarly in other studies, compared to face-to-face teaching, students enrolled in online courses show a significantly higher level of technology-related fear, anger, and helplessness (Butz *et al*., 2015). Hence, the trick lies in identifying situations where educational technology will be appropriate and identifying when and how to use it.

Many researchers examined the perceived ease of use of different kinds of technology, perceived usefulness, attitudes toward the technology, intentions to use technology and actual behaviours (Davis, 1989; Camilleri & Camilleri, 2017). The findings indicated that the participants' perceived usefulness has a positive and significant effect on their attitudes and on their intentions to use technologies (Al-Rahmi *et al*., 2018; Cheng & Yuen, 2018; Merhi, 2015; Schoonenboom, 2014). Al-Rahmi *et al*. (2018) indicated that the students' perceptions about the usefulness of social media have led them to engage in active collaborative learning. On the other hand, Camilleri & Camilleri's (2021) study revealed that students' perceived interactivity as well as their higher education institutions' facilitating conditions were having an effect on their perceptions about the usefulness of remote learning, on their attitudes as well as on their intentions to use them. Venkatesh et al., (2013) posited that facilitating conditions including tangible elements like infrastructures, equipment and technology, as well as intangible aspects like the provision of training, development and support for the users of technology, can influence the individuals' intentions to utilize certain technologies. Similarly, Teo (2009) as well as Lin et al. (2013) also argued that appropriate infrastructures and the delivery of adequate training and support would probably entice the individuals' intentions to engage with educational technologies. Therefore, it is imperative to realise that there are many factors that influence perceptions in ODeL utilization more than just technology.

While the use of technology can be viewed as paramount and a big contribution towards improved teaching and learning, offering a sense of independence and autonomy to students and improving thinking levels among students, as suggested, it is also realised that it has inconsistencies that leaders have to take into consideration with its use in ODeL delivery. As, Ag-Ahmad (2020) indicated there are other studies that found online learning failing to produce a desirable outcome due to limited access to the Internet as well as technical and financial issues for individual students. Therefore, the lesson that can be learnt is that education technology

leaders, planners, managers and administrators have to take into consideration the negative consequences of such use of technology and look at ways of averting such inconsistencies for the benefit of the student user in supporting individualized learning as the students or learners are the important stakeholders during the whole teaching and learning process.

2.4.2 Institutional Support

Corry (2008) suggests support systems can be divided into three different areas. Academic support, administrative support, and technical support. Academic support involves instructors providing substantive engagement and feedback for course activities. Administrative support involves things such as financial aid, advising, registrar services etc. For schools using technical systems to deliver education, it is not a matter of whether a student will have problems; it is a matter of *when* they will have problems (Messo, 2014). The Simpson (2002) study found that support can be extended to include all activities beyond the production and delivery of course materials that assist in the progress of students in their studies which entails both academic and non-academic support. According to Simpson (2002), academic or tutorial support deals with supporting students in the cognitive, intellectual and knowledge issues of specific courses or sets of courses including developing general learning skills while non-academic or counselling support entails the support of students in the affective and organizational aspects of their studies. Both studies recognise the importance of both academic and non-academic support hence the study presumes that students who are ably supported have positive experience and make progress in their studies.

On the other hand, in the study of the challenges facing Open and Distance Learning students at the Zimbabwe Open University (ZOU), Musingafi *et al*. (2015) established that major benefits of ODL are related to its flexibility, accessibility, affordability and life-based education opportunities. It enables an expansion of tertiary enrolments at less cost per student than under

the conventional residential campus system (Pityana, 2004). Despite the expanding growth of ODL and its benefits, students who enrol with ODL have been shown to face individual, institutional and instructional challenges (Bhalalusesa, 1998, 1999; Cosmas and Mbwette, 2009; Mbukusa, 2009; Mushi, 2001) hence reemphasizing need for student support. Individual related challenges were found to be lack of sufficient time for study; problems related to the access and use of ICT; financial constraints; lack of support from employers; and occasional obstacles resulting from travelling distance from home to the regional centre; especially during face to face and examinations sessions. Instructional related challenges were established as ineffective and delayed feedback of students' assignments and examinations results, lost scripts and unrecorded grades. These instructional related challenges contributed negatively to students' learning because students would find it difficult to move on to new content. The study found that the institutional related challenges that ODeL students face in the course of their studies include delayed or lack of study materials; accessing administrative services; lack of an effective institutional network of technical assistance; lack of responsiveness from regional centre or headquarters administrative staff; lack of appropriate students' services support; and lack or delayed important information. Musingafi *et al.* (2015) study indicates that students felt that institutional challenges greatly affected their performance and progress.

There are many reasons that can be advanced for provision of institutional support as this kind of support can avert institutional, instructional and individual challenges. These range from trying to increase student retention due to high drop-out rates that ODeL faces, students study demands that can overburden them leading to late completion of programmes being minimised and the sense of isolation that independent study brings lessened. Henceforth, it can be appreciated that despite the successes in ODeL, there are also challenges, opportunities and lessons that can be learnt from its utilization. Consequently, there could be room for interventions that can be employed for improved ODeL student experiences.

2.4.3 Interaction and Communication

The online learning literature is largely univocal about the importance of interaction (Lou *et al*. 2006; Anderson 2003; Sutton 2001). Thorson and Rodgers (2006) maintained that the concepts of interactivity can be categorized into human-to-human, human-to-document, and human-to-system interactions. Consequently, the student-student and student-faculty interaction can be extended to include student-instructor, student-content and student-system interaction since ODeL involves teaching and learning that is complex and influenced heavily by technology. This is specifically true for learners who may be considered less independent and thus may require direct interaction throughout the instructional process (Messi, 2014). To foster interaction between learners, in certain cases, online support is offered through real time chat, advice, and email discussion groups with staff and other students. Additionally, because there is a possibility that new students to ODL and its innovations, chance for confusion exists (Ojo & Olakulehin, 2006).

Student support is influenced by the level of interaction and communication. Perceived interactivity refers to the extent to which individuals perceive that existing technologies would allow them to feel in control when they communicate with others (Chattaraman *et al*., 2019; Liu, 2003). Chen *et al*. (2007) argues that interactivity is related to media richness. The authors contended that different media vary in their ability to improve communication. The efficacy of interactive communications is based on the immediacy of feedback, multiple cues, language variety and personal focus (Chen *et al*., 2007). Garrison (1993) indicates that those who see sustained collaboration as the educational ideal will generally define quality education in terms of the nature and degree of the two-way communication process. This is consistent with the importance of having active interaction between the instructor and the students for a more effective learning. Computer mediated education enables students to search for solutions, to share online information with their peers, to evaluate each other's ideas, and to monitor one

another's work (Lambić, 2016; Soflano, *et al*., 2015; Sung *et al*., 2015). According to the social constructivist theory, individuals necessitate social interactions (Ainsworth, 2006; Fridin, 2014; Lambropoulos *et al*., 2012; Tam, 2000). They develop their abilities by interacting with others (Camilleri & Camilleri, 2021). Hence, in an online learning setting, students need to feel that they are engaging in human-to-human interaction and have the opportunity to develop personal relationships (Lowenthal & Snelson, 2017). However, other studies indicate that during interaction response time, lack of face-to-face interaction and absence of socialisation were among the challenges faced (Ag-Ahmad, 2020). On the other hand, it needs to be recognised that ODeL enrols a big number of students such that the level of two-way communication is limited depending on whether the studying is taking place synchronously or asynchronously and the pace at which each individual student is studying.

During remote course delivery, students may not always have access to appropriate interactive technologies, learning materials or to adequate productive environments (Bao, 2020). There can be instances where course instructors and students could require facilitating conditions like technical support or training and development to enhance their competences and capabilities with the use of remote technologies. Students' relationship with teachers and learning content is highly relevant for learning; so, too, are the relationships between students and their peers (Weidlich & Bastiaens, 2018; Zhao *et al*., 2005). Above all, teachers must be easily available for students both online and, if possible, in person to avoid feelings of isolation (Hall & Villareal, 2015; Hunt, 2015; Israel, 2015) though it is difficult in situations where teachers are in a dual mode have to attend to students in the face-to-face mode too.

Interaction supports students in the cognitive, intellectual and knowledge issues of specific courses or sets of courses, and in the affective and organizational aspects of their studies. Hence, several pedagogical models are increasingly encouraging educators to blend face-to-face learning methods with technology-mediated instruction (Furió *et al*., 2015; Ozkan & Koseler,

2009). The concept of blended learning suggests that course delivery is carried out in-person and through online media (Gikandi *et al*., 2011; Porter *et al*., 2014; Thai *et al*., 2017). Course participants can be separated by distance if they use digital and ubiquitous technologies (Camilleri & Camilleri, 2017; Moore *et al*., 2011; Motiwalla, 2007; Sánchez & Hueros, 2010). But many educators are supporting group interactions in collaborative learning contexts (Kurucay & Inan, 2017). Synchronous technologies allow them to control and monitor their students' engagement, and to keep a track record of their interactions during virtual sessions (Camilleri, 2021a). As a result, that can be in a better position to implement student-centred strategies and tactics, to improve learning outcomes. Thus, increased student involvement by immediate interaction could result in increased learning that can be reflected by test performance, grades, and student satisfaction,

In conclusion, while the literature emphasizes on use of policy to establish and manage ODeL, the ODeL systems in the institutions under study have been established and operating based on institutional policies and changes in the operating environment with lack of harmonization. Additionally, institutions under study are operating on a dual made which is tantamount to being influenced by management and operations of the conventional mode. Hence this could signify differences in institutional contexts and characteristics under which students are studying. Many academics believe that online learning has been effective in reducing the cost of post-secondary education by spreading the cost of a class to cover a large number of students compared to the traditional classroom (Ag-Ahmad, 2020) using technology.

Previous studies focusing on student outcomes found that technology is intrinsic to online learning though it has failed to produce a desirable outcome due to limited access to the Internet as well as technical and financial issues which is particularly common especially in underdeveloped countries (Ag-Ahmad, 2020) like Malawi. These findings could attest to the credence that the cost of post-secondary education has somehow been transferred from the

provider to the student in that the student has to suffer the cost for internet and other learning resources. Furthermore, studies have indicated that previous exposure, know- how and flexibility of use technology contribute to student comfortability in using technology to study leading to better outcomes, needless to say that there is also need to focus on the process of studying itself apart from the end result bringing into question the quality and relevance of ODeL delivery mode provision and use vis-à-vis process. Therefore, this study focused on students' as users to establish their perceptions on the teaching and learning process while considering that the process is what leads to the outcome. Perhaps what should be looked at is that students are expected to use certain technologies as a requirement to complete their educational program, whether they like it or not. Lastly, there are studies that have highlighted the successes, challenges and lessons that have been learnt in ODeL utilization pre, within and post COVID-19 period in other developing countries that need to be either corroborated or disputed and look at possible ways of averting through interventions for improved student experiences through findings of this current study.

This literature review has been presented to document or justify the importance of the research problem (Shelden *et al*., 2010) by relating it to other previous studies. The interest was to establish whether the findings of the study support or modify existing ideas and practices advanced in the literature. Or alternatively the study could possibly expand the understanding of ODeL delivery mode and consequently give an understanding of the factors that influence student perception in ODeL utilisation in Malawian public HEIs. The main question in the study therefore was how students utilise such open, distant and e-learning environments with "virtual" reality and how they perceive them. Thus, the aim of the study was to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public higher education institutions.

CHAPTER 3: METHODOLOGY

3.0 Overview

Methodology is the way the entire research project was designed and conducted in addressing the question on how the researcher approached the research, designed and conducted it, so as to competently answer the research questions (Kivunja, 2016). Thus, in this section, the research methodology has been discussed, covering the research paradigm, research approach and design, methods that were followed and the reasons these were applied have been explained. The section also covers the research setting, participant sampling techniques, procedures of data gathering, instruments that were used, trustworthiness, ethical considerations in collecting data and the processes employed for data analysis.

3.1 The Research Paradigm

The approach to research involves philosophical assumptions as well as distinct methods or procedures. A set of common beliefs and agreements shared between scientists about how problems should be understood and addressed, meaning a basic set of beliefs that guide methods or procedures in research is a research paradigm (Creswell, 2012). This study was built on the pragmatism paradigm, to allow its ontological and epistemological perspectives help in framing the research design and research methodologies. Pragmatism is considered useful for the current study because it considers the research question to be more important than either the method used or the paradigm that underlies each method (Tashakkori & Teddlie, 2003).

3.2 The Research Approach and Design

The study adopted a mixed methods approach where both quantitative and qualitative data collection techniques and analysis procedures were employed (Saunders et al., 2012). Quantitative design provided the opportunity to gather data from a large number of people and generalize results, whereas qualitative permits an in-depth exploration of a few individuals.

Therefore, the study used a descriptive explanatory research design which has allowed the researcher to explain the nature of relationships, in addition to describing the variables in the study. The descriptive explanatory research design also strategically fits with the pragmatism research paradigm adopted in this study as it involved the combination of both descriptive and explanatory research designs. The approach provided the researcher an opportunity to gain insights into the study population and the variables under study and additionally assisted the researcher to reduce bias through probability sampling and maximize the reliability of data collected (Creswell, 2012). Descriptive designs provide a picture of the situation, person or event or show how things are related to each other and as it naturally occurs while explanatory sets out to explain and account for the descriptive information. So, while the descriptive may ask 'what' kind of questions, explanatory studies seek to ask 'why' and 'how' questions (Gray, 2014).

Generally, explanatory design usually initiates with a quantitative data collection and follows by a qualitative study to help researchers explain or build on the initial quantitative results (Kwok, 2012). This study avoided combining the two techniques, but rather, attempted to run them parallel, ensuring that quantitative data has been analyzed quantitatively and qualitative data analyzed qualitatively (Kwok, 2012; Saunders, *et al.*, 2012). Furthermore, Kwok (2012) observes that the strengths of a single method may be able to compensate the weaknesses or overlap the strengths of another method and bring greater scope, depth, and power of a research study.

It is therefore essential to obtain corroborating evidence from using a variety of methods in order to achieve validity. Mixed methods are, therefore, a way of achieving this through a triangulation of methods by combining methodologies in the study of the same phenomenon (Pansiri, 2005). In other words, this paradigm lends itself to the mixed methods approach

(Saunders *et al*., 2012) because both methods can be utilized based on the questions to be answered in a study (Kwok, 2012).

3.3 Setting

The research sites were selected public higher education institutions that have or are offering ODeL courses. The sites were either main campuses in these institutions or ODeL centres spread throughout Malawi. Both the main campuses and ODeL centre sites were targeted as some institutions amongst the targeted have ODeL centres spread across the country affiliated to the main campuses as an ODeL system within a larger university system especially for those operating as blended or dual modes. At the same time, there are also ODeL centres that are operating within the main campuses that were also targeted as research sites.

Currently, there are four public HEIs in Blantyre, Lilongwe and Mzuzu that are known to be or have been using the ODeL delivery mode (according to the universities websites). However, the study targeted two out of the four public HEIs giving a 50% representation, focusing on both the main and satellite centres that the targeted HEIs have across the country, hence, targeting a total of five centres out of the eight existing centres of which two were the main centres and three satellite centres affiliated to the two main centres. The five centres were purposively selected based on geographical location thus ensuring representation of the country's geographical locations and considering the homogeneity of the subjects within the same location.

3.4 Participants

The target population is the total group of individuals from which the sample must be drawn to whom we wish to generalize our findings. The target population sometimes called the sampling frame is a group of individuals with some common defining characteristic that the researcher can identify with (Creswell, 2012). The participants for this research were drawn from public

higher education institutions (HEIs), that utilize or have utilized the ODeL delivery mode. The target population in this study were registered undergraduate students who have utilized or are utilizing the ODeL delivery mode in the targeted HEIs. Furthermore, ODeL main and satellite Centre Managers who manage the centres that the students utilise in their studies were also targeted in the study.

3.5 Sample Size and Sampling Techniques

A sample is a group of people who take part in the investigation also referred to as participants. In the study multiple sampling techniques were employed. Purposive sampling was used to select HEIs and ODeL centre managers, while simple random was used to select student participants within the HEIs for the online survey. This meant that the population members under study had an equal chance of being selected (Creswell, 2012) and the probability of a member of the student population being selected was unaffected by the selection of other members of that population (Cohen *et al*., 2007). Convenience sampling was used to select student participants for the FGDs. Purposeful sampling is a qualitative sampling procedure in which researchers intentionally select individuals and sites to learn or understand the central phenomenon (Creswell, 2012). In selecting the HEIs, purposive sampling was used in seeking to represent a particular set of HEIs, that is, those that have or are offering and whose students are enrolled in ODeL courses. These have characteristics and important features that have determined the sampling frame and that was sought during the study.

With permission, student registers were obtained from the HEIs' main and satellite centre offices. The study targeted ODeL undergraduate students whose sample size was determined using a Cochran formula for calculating a sample size based on the total number of the ODeL undergraduate student population from the centre's student database that was obtained through the respective centre registries. Proportional sampling was further used to determine the sample size proportions of ODeL students in each of the universities. This sample gave a representative

interpretation of the target population views and experiences of ODeL delivery since sample size depends on the purpose of the study and the nature of the population under scrutiny (Cohen *et al*. 2007).

Out of a total population of 5089 students, an online survey questionnaire was administered to a sample of 358 ODeL students calculated using a sampling calculator to achieve a 95% confidence level and a 5% margin of error. There were five student FGD sessions that were convened engaging a total of 54 students, 39 males and 15 females. The FGDs were convened through advance communication taking advantage of students who visit the ODeL centres for study circles and consultations. A group of between 10 to 12 ODeL students were engaged during the FGDs. Five Centre Managers and one Directorate Administrator comprising of four males and two females were also interviewed. Five managers were engaged through face-to-face interviews and the Administrator was interviewed using Zoom.

There is a total of eight centre managers managing the eight centres within and off campus in the targeted HEIs. Therefore, six out of eight gives a good representation of the views of the total number of managers. Additionally, the Directorate Administrator and the five centre managers were purposively selected based on geographical location thus ensuring representation of the country's geographical locations and considering the homogeneity of the subjects within the same location.

3.6 Data Collection Methods and Instruments

Data were collected using online survey and focus group discussions (FGDs) among the students. An online survey was employed as a research strategy allowing a collection of a large amount of data using online survey tools but in a very rapid and economical way (Saunders *et al.*, 2012) from ODeL students. The online survey research questionnaires contained both structured and semi-structured questions (*refer to Appendix V*). The structured sections consisted of a five-point Likert scale type items that were used to collect data on institutional

characteristics and context and quality and relevance of student support services. Online surveys with structured questions on a 5-point Likert scale were used so that each student responded to the same set of questions in a predetermined order having these options: 1 – Strongly Disagree; 2 – Disagree; 3 - Neutral; 4 – Agree and 5 – Strongly Agree mostly used for descriptive research to examine and explain relationships between variables (Saunders *et al*., 2012). The structured question items on the questionnaire, were followed immediately by semi-structured questions, allowing new ideas to be brought up by the respondents (students). In this case, the questionnaire enabled respondents to provide as much information.

After obtaining the contact details (either or both e-mail addresses and mobile numbers) of all the registered students from the Centre registries, the link for the research instrument for the online survey was distributed via the respondents' emails and WhatsApp application. Thus, a questionnaire survey provides an opportunity to carry out an inquiry on specific issues on a large sample, thereby, making the study findings more reliable and dependable (Kothari & Gaurav, 2014). Additionally, the 5-point scale was considered appropriate in this study because it is believed to improve response rate and quality (Saunders *et al*., 2012).

As a way of data triangulation, FGDs (*Appendix VI*) were used to seek whether or not, there was convergence or divergence across the findings. There were five FGD sessions that were convened. The interview guide for the FGD contained open ended questions to allow for further probing and collecting more data from the participants. In this case, the study did not restrict views of participants while being mindful that students' study from their respective settings for their convenience and taking advantage of the opportunity of their existing familiarity with online studying. Semi-structured interviews were used to collect data from ODeL centre managers. The interview guide for ODeL Centre managers was semi-structured (*Appendix VII*) so that the researcher was able to probe and collect more data while keeping the study focused. Semi-structured individual interviews were conducted to gain a deep understanding of the

participants' view (Creswell, 2002) in a naturally flowing conversation (Cooksey & Macdonald, 2011). from the ODeL Centre Managers. Consequently, the data was triangulated to seek convergence or divergence (Creswell, 2009) across the survey and the interviews for the students and satellite Centre managers as participants.

3.7 Validity and Reliability

The study adopted different data collection methods, that is, online surveys, focus group discussions (FGDs) and semi-structured interviews. This strategy minimised biases that would have arisen in the use of just one method of data collection and ensured consistency in the interpretation and discussion of the findings. This approach demonstrates that both care in the process of research (credibility) and possible future uses of the findings (transferability, dependability and confirmability) have been adhered to.

The Likert scale survey questions were adapted from Peters 2010 and as such Cronbach's alpha was used to assess the reliability or strength of internal consistency of a set of scale items in the online questionnaire. Cronbach's alpha is a measure used to assess the reliability or internal consistency of a set of scale or test items and provides a way of measuring the strength of that consistency (Tavakol & Dennis, 2011). There are different reports about the acceptable values of alpha, ranging from 0.70 to 0.95, therefore this study took the cut off point for Cronbach's alpha to be 0.7. The data collection tools were piloted at one of the higher education institutions in Mzuzu as recommended by Saunders *et al.* (2012) in order to establish the face validity which led to informed amendments on the wording, clarity and flow, for inclusion in the final survey instrument (Wilkins, 2010). Additionally, the research instruments were reviewed by the research supervisor. Based on the supervisor's inputs, comments and outcomes of the pilot test, the research instruments were revised accordingly to reflect the adjustments.

3.8 Ethical considerations

This refers to the measures taken to maintain human dignity while gaining knowledge from research. The major ethical issues that were addressed in conducting this research are informed consent, anonymity and confidentiality. Therefore, the researcher first and foremost got clearance from the Mzuzu University Research Ethics Committee (MZUNIREC) *(refer to Appendix I)* and the Department of Teaching, Learning and Curriculum Studies at the University *(refer to Appendix II)*. Once the clearance was granted, the researcher sought permission and access to collect data from the management of the targeted HEIs through a formal letter describing the nature of the study to be conducted (*refer to Appendix III*). Permission was sought to access the premises, access potential subjects and access ODeL delivery platforms. A letter of self-introduction of the researcher to the institution is attached as *Appendix IV*.

Recruitment of subjects was done in a non-coercive manner by presenting information to each individual so that they could make an informed decision on whether to participate in the study or not. Consent was only obtained when an individual had been given a verbal or written explanation of the research and had the opportunity to ask questions about his/her involvement (*Appendix VIII*). Each individual was asked to sign a consent form which made it clear that they were free to withdraw at any time and that taking part in the research would in no way affect their existing status or employment in the institution under study. The consent forms addressed issues of anonymity and confidentiality. The study ensured that the information accessed was only used strictly for purposes of the study and protected from external access.

Additionally, ethical considerations promote that research participants should not be subjected to harm in any ways whatsoever (Fouka & Mantzorou, 2011). Since the data collection exercise took place amid the COVID-19 epidemic which was still active in the country, appropriate measures and protocols for disease spread prevention were adhered to as per the World Health

Organization (WHO) guidelines to avoid putting the researcher and the respondents in danger. This was observed and adhered to especially during the FGDs with students and interviews with the ODeL Managers in the HEIs.

3.9 Data Analysis and Presentation

3.9.1 Quantitative Data Analysis

Once data were collected, they were prepared for analysis. In the case of this study, the data were both explanatory and descriptive. Since the study adopted a mixed methods approach, quantitative data were analysed using descriptive statistics through the Statistical Package for Social Sciences (SPSS 25.0). Means and standard deviations as measures of central tendencies and dispersion, respectively, were computed for ODeL utilisation influence factors. Additionally, the coefficients of variation (CV) also known as the relative standard deviation (RSD) were also computed for all the factors under study. CV is a relative measure of variability that indicates the size of a standard deviation in relation to its mean and reported as a percentage. The descriptive statistics were used to compare the relative importance of the various influencing factors on utilisation. The quantitative data analysis results are presented using tables and numbers.

5.1.3.1 3.9.1.1 Missing Data

Scholars argue that missing values are a common phenomenon in social science research and could lead to a loss of statistical power required for accurate inferences (Masconi *et al*., 2015). Missing values could be a result of fatigue or respondents' refusal to answer questions deemed to touch on sensitive areas of a social phenomenon (Baraldi & Enders, 2010). In this study the data were also assessed for missing values with respect to both cases and variables using the Missing Completely At Random (MCAR) technique. The assumption in this technique was that events leading to missing data were independent of observable and unobservable parameters and occurred entirely at random (Polit & Beck, 2017).

5.1.3.2 3.9.1.2 Test of Normality Assumption

A test of normality assumption for each variable was done in this study. It is believed that many statistical procedures assume a normal distribution (Garson, 2012). Several techniques are used to examine normality of data distributions. Nonetheless, Wickham *et al*. (2015) argue that although formal goodness of fit tests such as the Kolmogorov–Smirnov and the Shapiro–Wilk may be powerful in testing normality, their lack of ability to figure out the non-normal features of distributions makes graphical approaches such as the quantile–quantile (Q-Q) plots more suitable. In this study, the Q-Q plots were used to examine normality of data distributions in each of the variables. Rank ordered values of each variable were plotted against expected normal distribution values of the variable (Wickham *et al*., 2015). The plotted data were expected to follow a diagonal line produced by a normal distribution. Data at the extreme ends were associated with slight curved patterns. Normality requirements for all variable were met.

5.1.3.3 3.9.1.3 Testing Unidimensionality

Garson (2012) argues that in order to measure constructs with multiple indicator variables, it requires confirmation that the indicator variables are indeed measuring the same thing using a test of unidimensionality. Tavakol and Dennick (2011) add that a measure becomes unidimensional if its items measure a single latent trait or construct. Hence, items put together in a scale account for all the differences within the same underlying construct (Ziegler & Hagemann, 2015).

In this study, principal components factor analysis (PCA) was performed on all the indicators of the two latent variables under study to confirm whether items within the indicators were unidimensional (Hagell, 2014). This is somewhat similar to exploratory factor analysis (EFA) which often is performed in research in order to reduce the number of factors. But, Plucker (2003) cautions that determining how many factors should be selected, is often a subjective and

an arbitrary process. One set of factors may be interpreted very differently by different researchers. In this case, Tabachnick and Fidell (2013) note that decisions about the number of factors and rotational schemes in EFA are bordered purely on pragmatic rather than theoretical basis.

Over and above reducing large number of variables, PCA has the ability to identify strong patterns in a given data set (Hair *et al*., 2014). The Kaiser–Meyer–Olkin (KMO) that requires factors with Eigen values greater than one and Bartlett's Test of Sphericity (completeness) were used to test sampling adequacy and completeness, respectively. KMO was expected to have a minimum of 0.6, while Bartlett's measure was required to be significant at 5% level (Costello & Osborne, 2005; Tabachnick & Fidell, 2013), with factor loadings expected to be above the 0.5 cut-off for acceptable loadings (Truong & McColl, 2011).

There is generally no agreement among scholars about the suitable sample sizes for factor analysis or test of unidimensionality. For instance, Tabachnick and Fidell's (2013) rule-of-thumb suggests that at least 300 cases are needed for factor analysis, while Hair *et al*. (2014) simply say sample sizes should be 100 or greater. Comery and Lee (1992) consider sample sizes as low as 100, poor; 200 as fair, 300 as good, 500 as very good, and 1000 or more as excellent. Plucker (2003) and Henson and Roberts (2006) illustrate that when communalities are high (> .60) and each factor is defined by several items, sample sizes can actually be relatively small. Other scholars (Byrne, 2001) state that solutions with correlation coefficients >0.80 require smaller sample sizes while Burton and Mazerolle (2011) argue that even 50 cases may be adequate for factor analysis. This study followed the advice of Hair *et al*. (2014) whereby 129 cases, which is greater than 100, were used.

3.9.2 Qualitative Data Analysis

Qualitative data were thematically analyzed using inductive approaches to generate themes using the NVivo software. Thematic analysis proved appropriate because of its flexibility, which enables researchers to familiarize themselves with the data, identify codes from the interview transcripts and generate and revise themes from the coded data (Braun & Clarke, 2006). The procedure of Jwan and Ong'ondo (2011) was used in analyzing data generated from the interviews by transcribing, collating, editing, coding, and reporting the data in a manner that made it sensible and accessible to the reader and researcher for purposes of interpretation and discussion. Qualitative data has been presented through verbatim quotations and texts.

The mixed methods strategy proved suitable because it is believed that biases inherent in a single method could neutralize or cancel the biases of other methods (Creswell, 2012). In other words, data was triangulated as a means for seeking convergence or divergence (Creswell, 2012) across the survey and the interviews since students and ODeL center managers were involved as participants.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS OF RESULTS

4.0 Overview

This chapter presents preliminary results in terms of response rate, demographic profile of the study sample, missing data, tests of normality and dimensionality, and construct reliability and validation. The chapter also reports results of the phenomena under study using both quantitative and qualitative data collected.

4.1 Preliminary Results

The general objective of the study was to investigate students' perceptions of utilization of ODeL delivery mode in Malawian public HEIs. Four objectives were investigated in order to achieve the general objective. Two major dimensions of utilization of ODeL delivery mode that emerged from literature for this study were institutional characteristics and context standard, and quality and relevance of student support systems.

4.2 Online Survey

The impetus to assess response rate was to ensure that the proportion of the results were representative of the target sample and that the questionnaire performed as intended. According to Chung (2022), 50% is considered excellent response rate in social research online surveys. Hence, as a follow-up, repeat reminder emails, WhatsApp messages and telephone calls to the respondents were made to ensure a good survey response rate of 50% or higher. However, out of a sample of 358 ODeL students, 129 participants responded in the online survey, thus giving an overall response rate of 36.0% as shown in Table 4.1. Based on recommendations by Chung (2022), a good survey response rate ranges between 5% and 30%, hence, this study's response rate (36.0%) was found to be suitable. Moreover, extant literature suggests that 33% has been found to be a typical average response rate for many survey channels, including in-person and electronic ones (Lindemann, 2021).

Table 4.1: Response Rate

Number of HEIs	Sample Size	Number of Respondents	Response Rate (%)
2	358	129	36.0

Source: Survey Data (2022)

4.3 Demographic Profile of the Online Survey Respondents

Students' demographic profile was examined in terms of gender, level or year of study, student base, type of institution, period of using ODeL delivery mode, platform used, learning format, medium used, type of technological devices used and form of content delivery. Out of the 129 respondents, 121 had no missing data on the demographic aspects. The demographics in this study were used mainly to explore and describe more the population's characteristics rather than for the subsequent descriptive statistical analyses undertaken on the study variables. Graham (2009) advises that if the number of the cases with missing values is 6% or less then they can be ignored. In case of the current study, 8 cases have missing values in demographics which is 6% of the respondent size. On this basis, the missing values on demographics did not affect the power of the statistical procedures undertaken to explore the study variables. Hence, the missing data did not lead to any perceived biases in the exploration.

From Table 4.2, the results show that a higher percentage of respondents [78.7% (n = 100)] were male students compared to their female counterparts [21.3% (n = 27)]. The majority of the respondents [36.2% (n = 46)] were students in Level/Year 3 of study, followed by those who were in Level/Year 1 [30.7% (n = 39)]. In terms of student base, the majority of students [83.7% (n = 108)] operated from satellite centers of the universities as opposed to 16.3% (n = 21) of

students who operated from the main campus centers. Most of the students [37.2% (n = 45)] have been using the ODeL delivery mode for a period of one year, followed by 24.8% (n = 30) of students who have been using the ODeL delivery mode for three years.

In terms of the platform used, Moodle has been widely used by most of the students [93.8% (n = 121)], and 57.5% (n = 73) of students have been learning alone at their own time. The medium used to access the learning materials varied, but most students [44.9% (n = 57)] relied on the use of online written material, followed by those who used videos [24.4% (n = 31)] and then audios [11.8% (n= 15)]. Furthermore, a cellphone was the mostly used technological device by most students [69.0% (n = 89) followed by a computer [20.2% (n = 26)]. It was observed that the main form of content delivery was through online access [68.2% (n = 88)], followed by WhatsApp [20.2% (n = 26)].

Table 4.2: Demographic Profile of the Students

Variable	Categories	Frequency (N)	Percentage (%)
Gender			
	Female	27	21.3
	Male	100	78.7
Level or year of study			
	Level 1	39	30.7
	Level 2	15	11.8
	Level 3	46	36.2
	Level 4	27	21.3
Student base			
	Main campus center	21	16.3
	Satellite center	108	83.7
Type of institution			
	Online learning only	68	52.7
	Combined Online and Face to Face	59	45.7
	Emergency Remote Learning	2	1.6
Period using ODeL delivery mode			
	One year	45	37.2
	Two years	23	19.0
	Three years	30	24.8
	More than three years	23	19.0
Platform used			
	Google Classrooms	1	0.8
	Moodle	121	93.8
	Other	7	5.4
Learning format			
	Online alone at my own time	73	57.5
	Online with other students at same time	54	42.5
What medium have you used?			
	Audios	15	11.8
	Face to face tutorials	5	3.9
	Online written material	57	44.9
	Videos	31	24.4
	Other	19	15.0
Type of technological devices used	Cellphone	89	69.0
	Computer	26	20.2
	Printed material	3	2.3
	Other	11	8.5
Form of content delivery			
	Text messages	4	3.1
	Email	3	2.3
	Online Access	88	68.2
	WhatsApp	26	20.2
	Other	8	6.2

Source: Survey Data (2022)

4.4 Missing Data

The extent of missing data in this study was assessed using the Missing Completely At Random (MCAR) technique. The assumption here was those events leading to missing data were independent of observable and unobservable parameters and completely happened at random (Polit & Beck, 2017). The results of MCAR indicated lack of missing values from the 129 respondents on the measurement of the variables under investigation, guaranteeing statistical power on the collected data.

4.5 Test of Normality Assumption

The study used Q-Q plots to examine normality of data distributions in each of the nine indicator variables.

4.5.1 Normality of Institutional Characteristics and Context Variables

5.1.3.4 4.5.1.1 Institutional Facilitating Conditions

Rank ordered values of institutional facilitating conditions were plotted against expected normal distribution values of the variable (Wickham *et al.*, 2015). As displayed in Figure 4.1, the plotted data largely followed a diagonal line produced by a normal distribution. Data at the extreme ends were associated with slight curved patterns. Nonetheless, the normality requirement for institutional facilitating conditions was met.
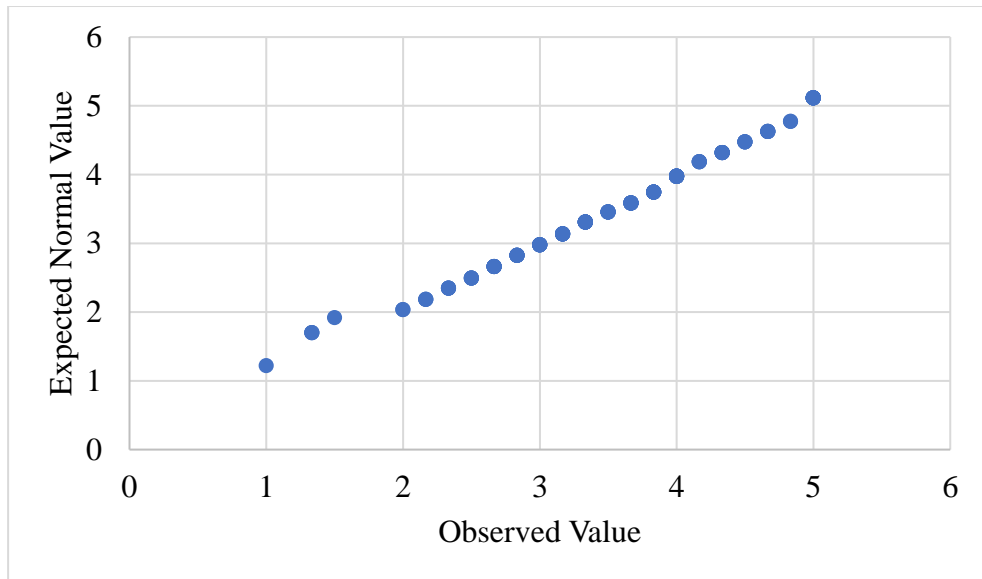
Figure 4.1: Normal Q-Q Plot of Institutional Facilitating Conditions

Source: Survey Data (2022)

5.1.3.5 4.5.1.2 Learner Centeredness

The plot of the rank ordered values of the leaner centeredness against the expected normal distribution values revealed that the rank ordered values largely followed the diagonal line bar, except for a few points at the extremes (Figure 4.2), hence the normality assumption of leaner centeredness was met.
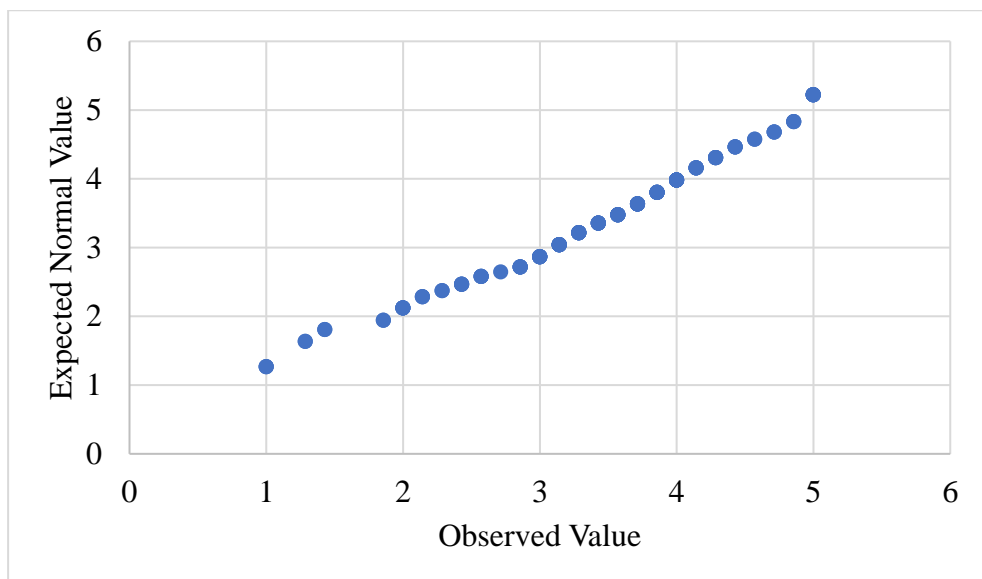
Figure 4.2: Normal Q-Q Plot of Learner Centeredness

Source: Survey Data (2022)

5.1.3.6 4.5.1.3 Cost and Affordability

Rank ordered values of the cost and affordability variable were plotted against the expected normal distribution values. Results revealed that dots stayed close to the diagonal line especially in the middle with slight curved patterns (Figure 4.3). Normality assumption was therefore met for cost and affordability distribution.
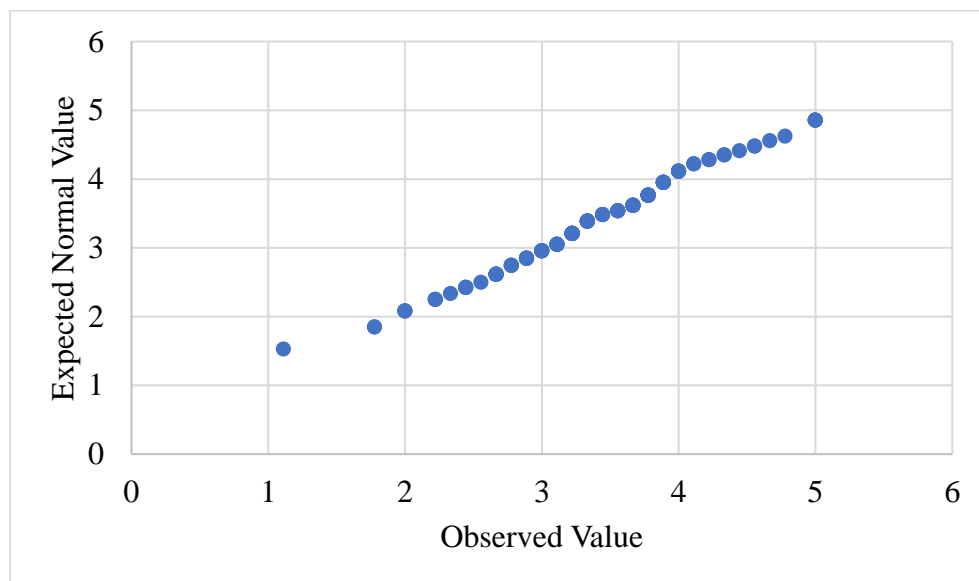
Figure 4.3: Normal Q-Q Plot of Cost and Affordability

Source: Survey Data (2022)

4.5.2 Normality of Quality and Relevance of Student Support Systems Variables

5.1.3.7 4.5.2.1 Institutional Support

Rank ordered values of institutional support were plotted against expected normal distribution values of the construct. As shown in Figure 4.4, the plotted data largely followed a diagonal line produced by a normal distribution. Data at the middle were associated with a slight curved pattern. Nonetheless, the normality requirement for institutional support was met.
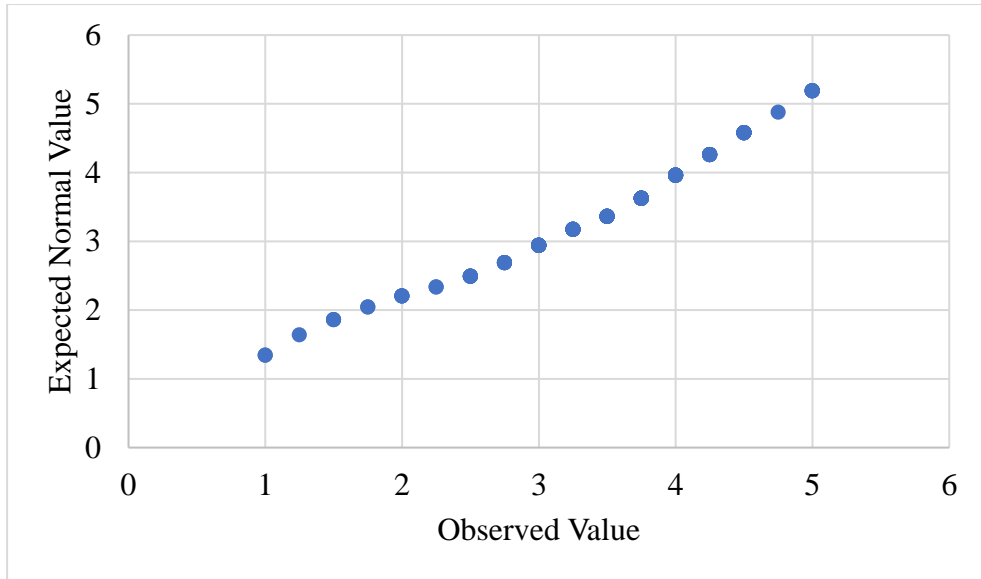
Figure 4.4: Normal Q-Q Plot of Institutional Support

Source: Survey Data (2022)

5.1.3.8 4.5.2.2 Quality and Relevance of Student Orientation

The plot of the rank ordered values of the quality and relevance of student orientation against the expected normal distribution revealed that data points closely followed the diagonal line except for a few points at the upper extreme (Figure 4.5), thus indicating that normality assumption was met.
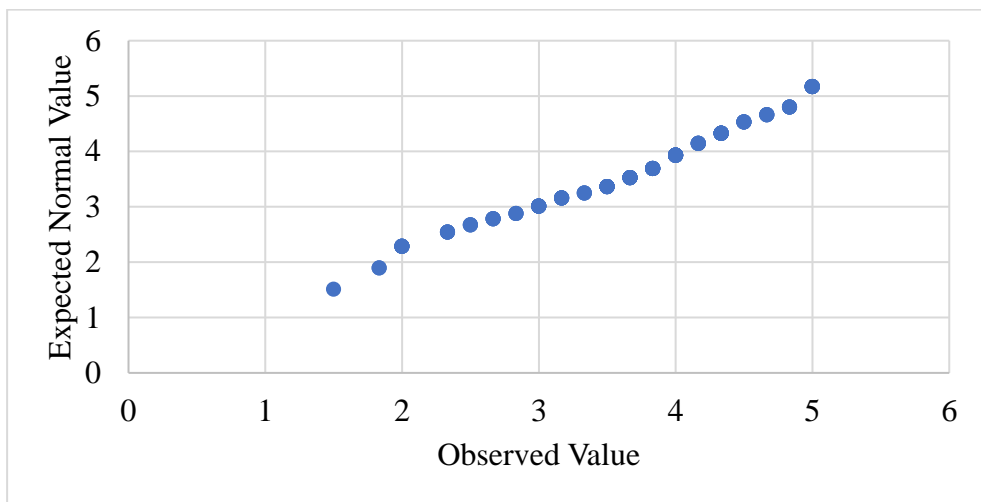
Figure 4.5: Normal Q-Q Plot of Quality and Relevance of Student Orientation

Source: Survey Data (2022)

5.1.3.9 4.5.2.3 Use of Technology

Rank ordered values of use of technology were plotted against expected normal distribution values of the construct. As shown in Figure 4.6, the plotted data largely followed a diagonal line produced by a normal distribution. Data were associated with slight curved patterns. However, the normality requirement for use of technology was met.
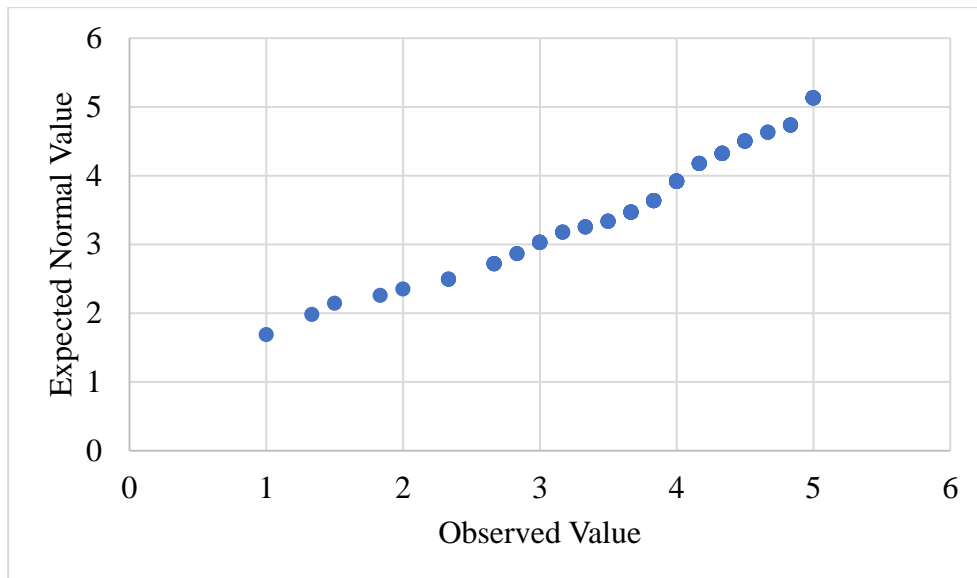
Figure 4.6: Normal Q-Q Plot of Use of Technology

Source: Survey Data (2022)

5.1.3.10   4.5.2.4 Connectedness to Other Students

Rank ordered values of the connectedness to other students were plotted against the expected normal distribution values. Results revealed that dots stayed close to the diagonal line especially in the central area (Figure 4.7). The lower extreme however revealed values that appeared larger than expected leading to some slight negative skew that was nonetheless not serious. Normality assumption was therefore met for connectedness to other students' distribution.
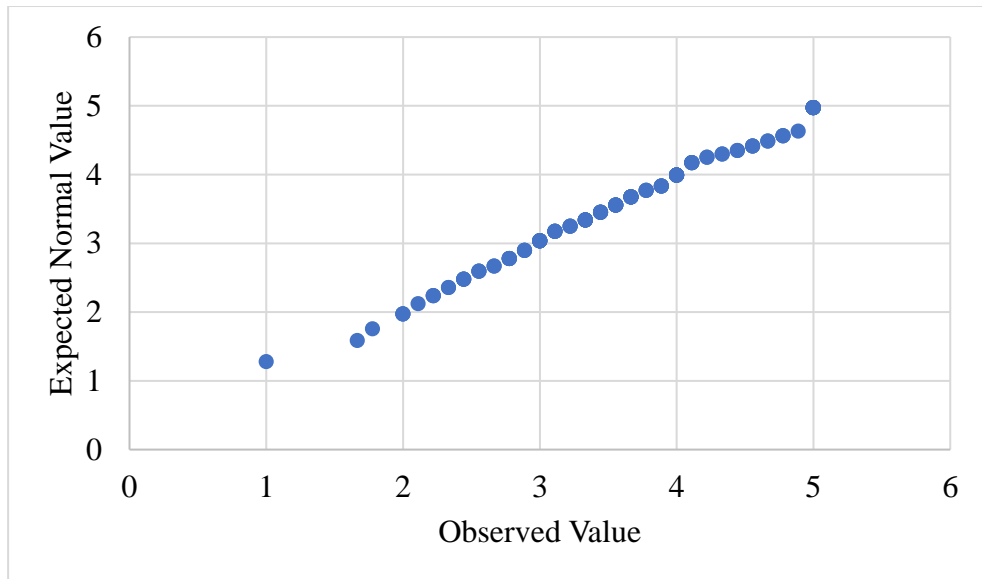
Figure 4.7: Normal Q-Q Plot of Connectedness to Other Students

Source: Survey Data (2022)

5.1.3.11   4.5.2.5 Interaction and Communication with Tutors and System

The plot of the rank ordered values of the interaction and communication with tutors and system against the expected normal distribution values revealed that the rank ordered values largely followed the diagonal line bar, except for a few points at the extremes (Figure 4.8), hence the normality assumption of interaction and communication with tutors and system was met.
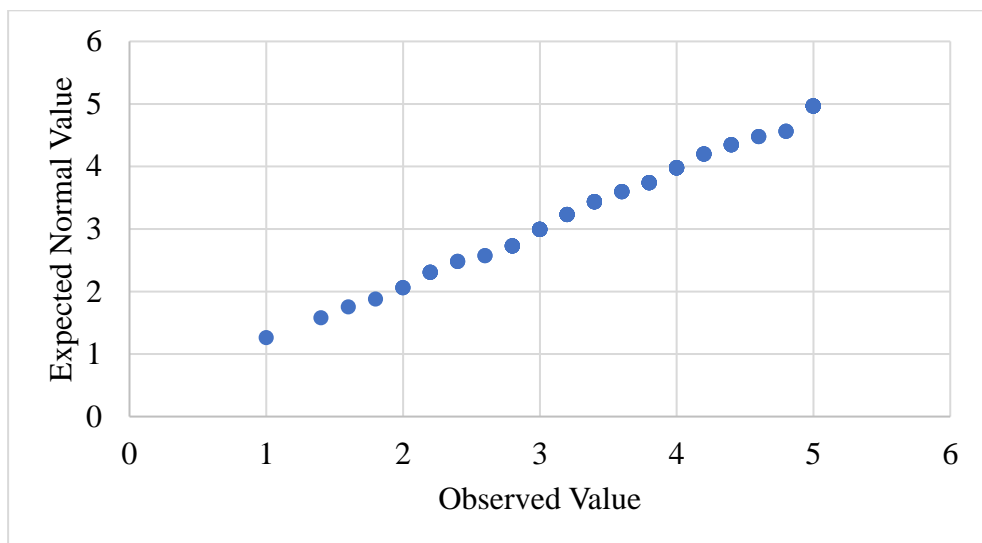
Figure 4.8: Normal Q-Q Plot of Interaction and Communication with Tutors and System

Source: Survey Data (2022

5.1.3.12   4.5.2.6 Academic and Non-academic Support

Rank ordered values of academic and non-academic support were plotted against expected normal distribution values of the construct. As displayed in Figure 4.9, the plotted data largely followed a diagonal line produced by a normal distribution. Data were associated with slight curved patterns. However, the normality requirement for academic and non-academic support was met.
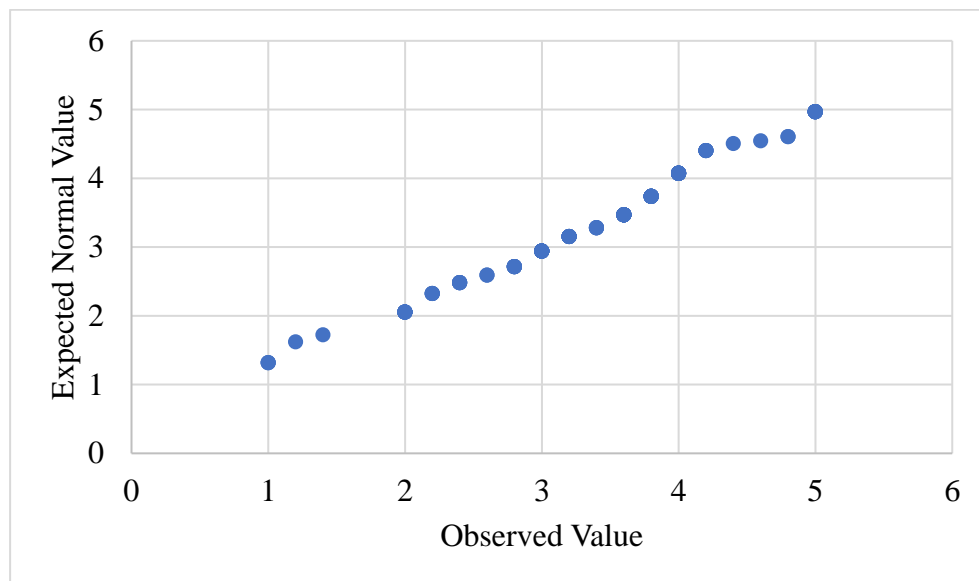
Figure 4.9: Normal Q-Q Plot of Academic and Non-academic Support

Source: Survey Data (2022)

4.6 Reliability Tests

A reliability test was run to ascertain the extent to which the items in the questionnaire used in this study measure the same concept or construct, hence, supporting the inter-relatedness (internal consistency) of the items within the test. This study applied the Cronbach's Alpha, which is the most widely used objective measure to test reliability. All the two constructs with their indicators under this study were tested and attained a Cronbach alpha >.70, the lowest being .718 for institutional characteristics and context, while the highest recorded .931 for quality and relevance of student support systems (Table 4.3).

51

Table 4.3: Reliability Test Results for the Constructs and Indicators

Constructs and their Indicators	Number of items	Cronbach Alpha, α
Institutional Characteristics and Context	**3**	**.718**
Institutional Facilitating Conditions	6	.858
Learner Centeredness	7	.915
Cost and Affordability	8	.801
Quality and Relevance of Student Support Systems	**6**	**.899**
Institutional Support	4	.820
Quality and Relevance of Student Orientation	6	.890
Use of Technology	6	.922
Connectedness to Other Students	9	.931
Interaction and Communication with Tutors and System	5	.886
Academic and Non-academic Support	5	.930

Source: Survey Data (2022)

4.7 Dimensionality of the Questionnaire Instrument

An exploratory factor analysis was performed to assess the dimensionality of the scale items within the nine indicators of the two latent variables under study. A principal component analysis (PCA) with Varimax rotation was employed. The Kaiser–Meyer–Olkin (KMO) that requires factors with Eigen values greater than 1.00, and Bartlett's Test of Sphericity were used to test sampling adequacy and completeness, respectively. KMO was expected to have a minimum of 0.6, while Bartlett's measure was required to be significant at 5% level (Costello & Osborne, 2005; Tabachnick & Fidell, 2013), with factor loadings greater than 0.5 were considered significant and included in the analysis (Truong & McColl, 2011).

4.7.1 Unidimensionality of the Institutional Characteristics and Context Indicators

Each of the three indicators of institutional characteristics and context was assessed for unidimensionality.

5.1.3.13 4.7.1.1 Institutional Facilitating Conditions

Six items were initially identified to measure institutional facilitating conditions in higher education institutions. PCA was conducted to verify item loadings through which unidimensionality could be ascertained and redundant items omitted from further analysis. The KMO value of 0.853 indicated that sampling was adequate (Table 4.4). Besides, the significant Bartlett's test of sphericity (χ^2= 314.035, p<0.05) signified that sampling provided for completeness in data collected under bedroom structure. All the six items loaded highly on one factor and explained up to 58.707% of the variance in institutional facilitating conditions. High loadings signified unidimensionality among institutional facilitating conditions items.

Table 4.4: Factor Structure for Institutional Facilitating Conditions

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Institutional Facilitating Conditions		**3.522**	**58.707**
Institution has the required infrastructure to support your learning	.672		
Institution has adequate equipment to support your learning	.812		
Institution has adequate staffing levels to support your learning	.775		
I can easily get access to the institution using different accessibility modes e.g. phone, email	.796		
I can easily access administrative services such as registering and paying fees	.779		
I get timely dissemination of important academic information	.755		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity (χ^2 = 314.035, p<0.05)	*.853*		

Source: Survey Data (2022)

5.1.3.14   4.7.1.2 Learner Centeredness

Provision of learner centeredness among the ODEL students in the HEIs was initially measured using seven items. PCA revealed that sampling was adequate and complete (KMO = 0.881; χ^2 = 584.557, p<0.05). All the seven items loaded on one factor and accounted for 66.438% of the variance in learner centeredness (Table 4.5). Unidimensionality with respect to learner centeredness was confirmed.

Table 4.5: Factor Structure for Learner Centeredness

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Leaner Centeredness		**4.651**	**66.438**
Institution promotes ownership of what I learn	.819		
Institution offers flexibility in studying at my own time and pace	.757		
Institution offers me a range of study choices	.804		
Institution offers me good quality of learning	.839		
Institution offers me high level of openness	.831		
The utilization of ODeL study mode gives me a sense of minimized physical distance	.806		
The utilization of ODeL study mode gives me a sense of minimized psychological distance	.846		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity (χ^2 = 584.557, p<0.05)	*.881*		

Source: Survey Data (2022)

4.7.1.3 Cost and Affordability

Nine items were proposed to measure the cost and affordability of ODeL mode in the HEIs as perceived by the students in the study. Although sampling was adequate and complete (KMO

= 0.799; χ^2 = 391.774, p<0.05), only eight of the nine items loaded highly on one factor, and accounted for 46.931% of the variance in cost and affordability (Table 4.6). The eight items were retained for further analyses involving cost and affordability indicator.

Table 4.6: Factor Structure for Cost and Affordability

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Cost and Affordability		**3.754**	**46.931**
I can use a range of devices to access content based on the platform being utilized by the institution	.757		
I find the cost of buying a device for access to content reasonable	.602		
I incur a reasonable cost to access content	.639		
I find it convenient to travel to and from center	.677		
The cost of travel to and from center is affordable for me	.605		
I find the purpose of travel to center realistic	.741		
Time spent at the center is reasonable for me	.791		
I find it beneficial to spend time at the center	.636		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity (χ^2 = 391.774, p<0.05)	.799		

Source: Survey Data (2022)

4.7.2 Unidimensionality of Quality and Relevance of Student Support Systems

Quality and relevance of student support systems was measured using six indicators, each of which was tested for unidimensionality.

5.1.3.15 4.7.2.1 Institutional Support

Provision of institutional support to students was measured using four items. All the four items loaded highly on the institutional support factor. The items explained a cumulative total of 65.038% of the variance in the institutional support (Table 4.7), thereby confirming unidimensionality of the indicator. Moreover, sampling was adequate and complete (KMO = 0.761; $\chi^2 = 179.940$, p<0.05).

Table 4.7: Factor Structure for Institutional Support

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Institutional Support		**2.602**	**65.038**
The institution keeps my studying up to date	.768		
The institution communicates to me in a timely manner	.813		
I access study materials in a timely manner	.852		
The course materials are appropriate and well designed	.791		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity ($\chi^2 = 179.940$, p<0.05)	*.761*		

Source: Survey Data (2022)

5.1.3.16 4.7.2.2 Quality and Relevance of Student Orientation

Adherence to quality and relevance of student orientation in HEIs was measured using six items. All the six items loaded highly on one factor, explaining 65.335% of the variance in quality and relevance of student orientation (Table 4.8). Sampling was adequate and complete (KMO = 0.849; $\chi^2 = 434.004$, p<0.05) and the unidimensionality requirement with respect to quality and relevance of student orientation was met.

Table 4.8: Factor Structure for Quality and Relevance of Student Orientation

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Quality and Relevance of Student Orientation		**3.920**	**65.335**
The institution offers general orientation to students	.672		
The institution offers digital literacy to students	.842		
I find interaction with technology easy	.859		
There are a wide range of devices that I use to access content	.793		
Online platform allows easy interaction with content	.831		
Platform used is user friendly as can be easily navigated	.838		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity ($\chi^2 = 434.004, p<0.05$)	*.849*		

Source: Survey Data (2022)

5.1.3.17   4.7.2.3 Use of Technology

Six items were used to measure use of technology by ODeL student in HEIs under study. The KMO value of 0.897indicated adequacy in sampling. Similarly, the Bartlett's measure of sphericity ($\chi^2 = 576.962$, p<0.05) indicated that sampling was complete. All the six items were extracted and loaded highly on one factor. The six items explained cumulatively 72.990% of the variance in use of technology and were unidimensional (Table 4.9).

Table 4.9: Factor Structure for Use of Technology

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Use of Technology		**4.379**	**72.990**
A range of devices can be used to access content technologically	.877		
Use of technology offers improved interaction and dialogue	.871		
Technology is matched to teaching and learning activities	.878		
Technology is enhancing my knowledge	.888		
Technology is improving quality of teaching and learning	.876		
Technology does not give me a sense of fear, anger or helplessness	.725		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity (χ^2 = 576.962, p<0.05)	*.897*		

Source: Survey Data (2022)

5.1.3.18   4.7.2.4 Connectedness to Other Students

A total of nine items were proposed to measure the connectedness to other students' indicator of quality and relevance of student support. PCA results presented in Table 4.10 revealed that sampling adequacy and completeness was met (KMO = 0.909; χ^2 = 864.692, p<0.05). All the nine items loaded highly on one factor. The nine items cumulatively explained 65.054% of the variance in connectedness to other students. The nine items were unidimensional and were therefore used for further analyses involving connectedness to other students.

Table 4.10: Factor Structure for Connectedness to other Students

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Connectedness to other Students		5.855	65.054
Platform allows easy interaction with peers	.784		
Platform promotes higher level of thinking	.713		
Peers are supportive	.850		
Platform allows online sharing of knowledge with peers	.865		
Platform allows evaluation of each other's ideas	.818		
Platform allows monitoring of one another's work	.701		
Gives feeling of connectedness to other students	.871		
Allows easy participation in online study circles	.829		
I find study circles beneficial	.809		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity ($\chi^2 = 864.692$, p<0.05)	*.909*		

Source: Survey Data (2022)

5.1.3.19   4.7.2.5 Interaction and Communication with Tutors and System

Responsiveness to interaction and communication with tutors and system under study was examined using five items. Results of the PCA (Table 4.11) confirmed the adequacy and completeness of sampling with regards to this indicator (KMO = 0.750; $\chi^2 = 415.622$, p<0.05). Seven of the ten items were extracted and loaded highly on one factor, which confirms unidimensionality. All the five items explained cumulatively 68.744% of the variance in interaction and communication with tutors and system.

Table 4.11: Factor Structure for Interaction and Communication with Tutors and System

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Interaction and Communication with Tutors and System		**3.437**	**68.744**
Platform allows easy interaction with tutors	.856		
Platform enhances two-way communication process with tutors	.865		
Platform allows tutors to give timely feedback on assignments and examination results	.826		
Platform reduces recurring incidences of lost scripts	.816		
Platform allows provision of recorded student grades	.779		
Kaiser-Meyer-Olkin Measure Bartlett's Test of Sphericity (χ^2 = 415.622, p<0.05)	*.750*		

Source: Survey Data (2022)

5.1.3.20   4.7.2.6 Academic and Non-academic Support

Academic and non-academic support was measured using five items. PCA confirmed that sampling was adequate and complete (KMO = 0.856; χ^2 = 518.895, p<0.05). All the five items were extracted and loaded highly on one factor that explained up to 78.203% of the variance in academic and non-academic support (Table 4.12). Unidimensionality requirement with regards to academic and non-academic support was therefore met.

Table 4.12: Factor Structure for Academic and Non-academic Support

Variables and Scales	Loading	Eigen values	Cumulative % Variance explained
Academic and Non-academic Support		**3.910**	**78.203**
The staff are available for your convenience to offer academic and non-academic support	.867		
The staff efficiency and willingness to help instils confidence in you	.895		
The staff give you adequate individual attention	.861		
There is immediacy of feedback and always try to address student requests as much as possible	.898		
The support offered gives me a sense of belonging to a meaningful learning community	.901		
Kaiser-Meyer-Olkin Measure *Bartlett's Test of Sphericity ($\chi^2 = 518.895, p<0.05$)*	*.856*		

Source: Survey Data (2022)

4.8 Descriptive Exploration of Study Variables

Descriptive statistics were used to explore the study variables with the view to understanding their prevailing status among ODeL status in HEIs. Response scores to the questionnaire items for the two constructs under study, i.e., institutional characteristics and context, and quality and relevance of student support were elicited on a 5-point Likert type scale having the following options, 1 – Strongly disagree; 2 - Disagree; 3 - Neutral; 4 - Agree; and 5 – Strongly Agree.

4.8.1 Institutional Characteristics and Context

The first objective of the study sought to establish institutional level characteristics and context of ODeL utilization that facilitate student learning in higher education institutions. Institutional

level characteristics and context was measured using three indicators. Accordingly, the three indicators were explored to establish how they were perceived among ODeL students in HEIs.

5.1.3.21   4.8.1.1 Institutional Facilitating Conditions

Respondents were asked about their perceptions on various aspects of institutional facilitating conditions as presented in the HEIs. The overall mean response score (*M=3.51*) with associated standard deviation (*SD = 1.158*) indicates that respondents agreed that their perceptions of the institutional facilitating conditions in the HEIs were high. However, the large and unacceptable magnitude of the coefficient of variation (*CV >30%*) confirms that respondents were not consistent in their perceptions of institutional facilitating conditions owing to wide variations in the perceptions among them (*CV=33%*). The proportions of respondents who did not agree [16.0% (n = 21) and those who remained neutral [19.7% (n= 25) were quite considerable (Table 4.13). On the overall, 55.3% (n = 72) of the respondents had generally high perceptions of institutional facilitating conditions, with 33.1% (n= 43) of these respondents agreeing, while 22.2% (n = 29) strongly agreeing.

Access to the institution (*M=3.94, SD=1.137, CV=29%*); access administrative services (*M=3.60, SD=1.175, CV=33%*); and infrastructure supporting student learning (*M=3.57, SD=1.184, CV=33%*) were some of the institutional facilitating condition aspects that received high perceptions from the ODeL students. Remarkably, of all the items, equipment supporting student learning received the lowest perceptions (*M=3.26, SD=1.234, CV=38%*) (Table 4.13).

During interviews and FGDs the student respondents brought up similar and additional aspects of institutional facilitating conditions and gave their perceptions about these aspects. The respondents perceived institutional set up and operations highly, where the institutional infrastructure is habitable and in a less conducive environment as a highly rated characteristic. However, the respondents indicated that some of the institutions are using rented premises as

their centre premises, while some use rented premises for exam administration and even for students to attend facilitation giving a lack of a sense of institutional belonging. The premises demand for classroom space is high close to and during exams and there are few and poor sanitation facilities. The low perception of institutional set up according to the student respondents is much more evidenced by lack of learning resources. There is lack of reliable library, resource centre and science laboratories especially in the satellite centres. Those students doing science courses have to travel to main hub laboratories at the centre for laboratory sessions. This entails finding student own accommodation and upkeep which is an additional expense. Additionally, the institutions have sophisticated equipment for video conferencing and recording which are not being utilised to facilitate learning.

On academic support especially admin support, respondents indicated that the level of interaction they have with centre management in the satellite centres is high such that they are glad that the staff calls each and every student by name giving students the feeling of being valued.

While centre managers did not indicate the aspects that they consider facilitating learning of students in ODeL they indicated that the institutional characteristics and context facilitate student learning. They indicated that they have the basic conditions that facilitate learning because they have what it requires to deliver programs through ODeL, that is, infrastructure, internet, staff (though not adequate). The theme, location of satellite centres, stood out. One centre manager brought in an aspect of location of the centres especially where they are using rented infrastructure:

> *Those rented premises are not situated in environments that are good for education. A lot of students complain of noise pollution [Manager B (May 18, 2022)].*

Table 4.13: Descriptive Statistics for Institutional Facilitating Conditions

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree				
	N	%	N	%	N	%	N	%	N	%	*M*	*SD*	*CV*
Institution has the required infrastructure to support your learning	9	7.0%	18	14.0%	21	16.3%	52	40.3%	29	22.5%	3.57	1.184	33%
Institution has adequate equipment to support your learning	10	7.8%	31	24.0%	27	20.9%	37	28.7%	24	18.6%	3.26	1.234	38%
Institution has adequate staffing levels to support your learning	6	4.7%	27	20.9%	34	26.4%	38	29.5%	24	18.6%	3.36	1.145	34%
I can easily get access to the institution using different accessibility modes e.g., phone, email	6	4.7%	13	10.1%	12	9.3%	50	38.8%	48	37.2%	3.94	1.137	29%
I can easily access administrative services such as registering and paying fees	7	5.4%	18	14.0%	28	21.7%	42	32.6%	34	26.4%	3.60	1.175	33%
I get timely dissemination of important academic information	6	4.7%	22	17.1%	42	32.6%	39	30.2%	20	15.5%	3.35	1.080	32%
Overall	**7**	**5.6%**	**21**	**16.0%**	**25**	**19.7%**	**43**	**33.1%**	**29**	**22.2%**	**3.51**	**1.158**	**33%**

Source: Survey Data (2022)

5.1.3.22　　　4.8.1.2 Learner Centeredness

The second aspect of institutional level characteristics and context explored was learner centeredness that ODeL students experience in ODeL study mode in HEIs. Overall, the results (Table 4.14) suggest that respondents variably perceived the experience of learner centeredness provided by HEIs (*CV=34%*). The students' perceptions of learner centeredness suggest that respondents did not agree nor disagree. In other words, it suggests that the respondents were undecided (*M=3.40, SD=1.170*). Additionally, the proportions of respondents who did not agree [15.8% (n = 20)] and those who opted for a neutral position [23.9% (n = 31), were quite large. Nonetheless, most respondents [32.9% (n = 42)] agreed there was provision of learner centeredness in ODeL study mode in HEIs, while 19.0% (n = 24) strongly agreed.

In terms of mean response scores, the perceived reduction of physical distance through utilization of ODeL study mode (*M=3.58, SD=1.229, CV=34%*); and institution's promotion of ownership of what students learn (*M=3.53, SD=1.083, CV=31%*) were aspects of learner centeredness that were quite appealing to the respondents. However, provision of good quality learning (*M=3.19, SD=1.204, CV=38%*) received lower perceptions than the rest of the aspects of learner centeredness.

The theme that was prominent in the analysis of qualitative data is the existence of physical distance in ODeL delivery and how that affects effective learning. One of the managers referred to the aspect of distance and provision of good quality learning in trying to give what his view was on its definition and how learning is supposed to take place using the ODeL mode:

> *Actually, when you talk of ODeL it is the kind of learning that sees no boundary. When you talk of ODL it is not a situation where you are just damping some information on learners. Teaching and learning should still take place regardless of where somebody is [Manager M1 (May 27, 2022)].*

He indicated that in the institution students are not fully supported with their learning.

73

Table 4.14: Descriptive Statistics for Learner Centeredness

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
Institution promotes ownership of what I learn	7	5.4%	15	11.6%	33	25.6%	51	39.5%	23	17.8%	3.53	1.083	31%
Institution offers flexibility in studying at my own time and pace	8	6.2%	21	16.3%	31	24.0%	41	31.8%	28	21.7%	3.47	1.180	34%
Institution offers me a range of study choices	11	8.5%	19	14.7%	27	20.9%	47	36.4%	25	19.4%	3.43	1.204	35%
Institution offers me good quality of learning	10	7.8%	31	24.0%	35	27.1%	31	24.0%	22	17.1%	3.19	1.204	38%
Institution offers me high level of openness	9	7.0%	26	20.2%	39	30.2%	36	27.9%	19	14.7%	3.23	1.142	35%
The utilization of ODeL study mode gives me a sense of minimized physical distance	11	8.5%	16	12.4%	21	16.3%	49	38.0%	32	24.8%	3.58	1.229	34%
The utilization of ODeL study mode gives me a sense of minimized psychological distance	10	7.8%	19	14.7%	33	25.6%	46	35.7%	21	16.3%	3.38	1.154	34%
Overall	**9**	**7.2%**	**20**	**15.8%**	**31**	**23.9%**	**42**	**32.9%**	**24**	**19.0%**	**3.40**	**1.170**	**34%**

Source: Survey Data (2022)

5.1.3.23   4.8.1.3 Cost and Affordability

Respondents were asked their perceptions on cost and affordability. The overall mean response score and associated standard deviation (*M=3.34, SD=1.129*) indicated low perceptions of cost and affordability of the ODeL delivery mode in HEIs (Table 4.15). The high and unacceptable variability of perceptions of cost and affordability among the ODeL students was also confirmed (*CV=34%*) suggesting that respondents were not consistent. The proportion of respondents that disagreed [19.0% (n = 25) with the cost and affordability elements of the ODeL study mode and those that were neutral [21.4% (n = 28)] on perception towards cost and affordability were rather large and of concern. Notwithstanding, most respondents [32.7% (n = 42)] agreed that the cost and affordability of the ODeL study mode in HEIs was reasonable, while 16.5% (n = 21) strongly agreed.

Use of a range of devices to access content (*M=3.83, SD=1.105, CV=29%*); benefits of spending time at the centre (*M=3.64, SD=1.111, CV=31%*); and the reasonableness of spending time at the centre (*M=3.61, SD=1.018, CV=28%*) were predominantly perceived as aspects of cost and affordability that were more beneficial to the students. Nonetheless, the cost of travel to and from the centre (*M=2.86, SD=1.285, CV=45%*) had the lowest perception score among students.

During interviews two themes stood out, that is; unavailability of learning resources and high cost of studying in relation to purchase of learning resources and travel to and from satellite centres. Respondents indicated that learning resources are not available, such that students rely on soft copies of some materials which becomes challenging when it comes to matters of referencing. Students who wish to access library and books only do that at the main centre. Students have to buy modules at K30000 the whole package regardless of whether they are taking 6, 8 or 10 courses which increases their studies expenditures.

One student respondent lamented:

At our institution, we hear those modules were initially being distributed to students at the beginning of the semester while nowadays we are buying. Soft copies are provided on Moodle but we still have challenges when we would like to access them as at times there is no electricity, network issues, student background when it comes to online access and there are also those with eye problems that have problems to sit in front of computers [FGD B student (May 18, 2022)].

The students indicated that they have to travel to the main center for registration, writing of exams, sorting out fees balances and in case there are tutorials since all these are done at main hub other than the satellite centers hence underutilization of the satellite centers. Science students have to travel to the main hub for mid semester tests and lab sessions. One of the students indicated the consequences they face when they have to travel:

Imagine one has to make a long and expensive travel for project presentations at the main hubs just to do a 10-minute presentation at proposal stage, reporting and for the project defense including travel for deferred exams. In the past when we used to have tutorials turn up was low due to transportation logistics and location (main hub) for people who are located afar and for others who are working or doing business. Apart from the expected high costs of gadgets, internet bundles and purchases of hard copies of modules, there are also accommodation and upkeep expenses that we have to suffer when we have to stay around campus for months doing practical [FGD M2 student (May 30, 2022)].

Table 4.15: Descriptive Statistics for Cost and Affordability

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
I can use a range of devices to access content based on the platform being utilized by the institution	5	3.9%	14	10.9%	19	14.7%	51	39.5%	40	31.0%	3.83	1.105	29%
I find the cost of buying a device for access to content reasonable	11	8.5%	33	25.6%	32	24.8%	36	27.9%	17	13.2%	3.12	1.183	38%
I incur a reasonable cost to access content	6	4.7%	25	19.4%	38	29.5%	39	30.2%	21	16.3%	3.34	1.107	33%
I am required to travel to the center frequently	9	7.0%	35	27.1%	29	22.5%	33	25.6%	23	17.8%	3.20	1.221	38%
I find it convenient to travel to and from center	9	7.0%	34	26.4%	38	29.5%	32	24.8%	16	12.4%	3.09	1.135	37%
The cost of travel to and from center is affordable for me	20	15.5%	39	30.2%	26	20.2%	27	20.9%	17	13.2%	2.86	1.285	45%
I find the purpose of travel to center realistic	4	3.1%	21	16.3%	30	23.3%	56	43.4%	18	14.0%	3.49	1.024	29%
Time spent at the center is reasonable for me	5	3.9%	15	11.6%	26	20.2%	62	48.1%	21	16.3%	3.61	1.018	28%
I find it beneficial to spend time at the center	6	4.7%	19	14.7%	18	14.0%	59	45.7%	27	20.9%	3.64	1.111	31%
Overall	**7**	**5.7%**	**25**	**19.0%**	**28**	**21.4%**	**42**	**32.7%**	**21**	**16.5%**	**3.34**	**1.129**	**34%**

Source: Survey Data (2022)

Another theme that was conspicuous, was lack of operational policies at institutional level. Apart from institutional set up, the respondents rated operations of the institutions lowly as they indicated that there is lack of policies at institutional level that govern the running of the learning mode. One of the student interview participants underscored the importance of the institutions having policies that govern the operations of the ODeL program in tandem with the evolvement which the mode has undergone from serving only teachers to offering other courses to effectively facilitate student learning:

> *We have had experiences where the calendar has been adjusted extending it for 2 or 3 weeks or relatively a month leading to adjustments (effects) on the whole the calendar year; ODL students have ended up staying on campus for 4 months due to the calendar adjustments; holidays have been extended anyhow leading to unstable calendar years. While the minimum duration of study is 4 years which students desire to do, in some cases students go up to 5 years without justifiable reasons. History has it that in the past the mode was mostly used by upgrading teachers. This has resulted into ODL being viewed as a mode for teachers since it also has the majority of students [FGD M2 student (May 30, 2022)].*

4.8.2 Quality and Relevance of Student Support Systems

The second objective of the study assessed the quality and relevance of ODeL student support systems in HEIs. Hence, the prevailing status of each of the six indicators of quality and relevance of student support was examined to establish how they were perceived among ODeL students in HEIs.

5.1.3.24   4.8.2.1 Institutional Support

Respondents were asked how they perceived the level of institutional support provided in HEIs. The overall mean response score together with the associated standard deviation (*M=3.47,*

SD=1.112) generally indicated low perceptions of institutional support provision to the ODeL delivery mode in HEIs. There was poor and high variability of perceptions of institutional support provided to ODeL students (*CV=32%*) signifying that respondents were not consistent in their perceptions. The proportions of students who did not agree [12.1% (n = 16)] and those who opted to be neutral [24.7% (n = 32)] were rather considerable. On the overall, 38.0% (n = 49) of the respondents agreed that the HEIs provided adequate institutional support, while 17.2% (n = 22) strongly agreed (Table 4.16).

Among the aspects of institutional support that were very impressive to the respondents based on their perceptions included: appropriateness and design of course materials (*M=3.66, SD=1.093, CV=30%*); and the updated studying process (*M=3.63, SD=1.090, CV=30%*). Nevertheless, timely access of study materials (*M=3.30, SD=1.115, CV=34%*) was perceived the lowest by the students.

The main theme in qualitative data analysis was access to and interaction with instructors. One respondent gave an encounter of the experience his class had on access to study materials and keeping studying up to date:

> *Our lecturer has just started uploading content the second week of June for a cohort since we started a semester in April and the semester is ending in August which includes a grace week and time to sit for exams. We fail not because we cannot perform but because of the lecturers own making [FGD K student (June 7, 2022)].*

Table 4.16: Descriptive Statistics for Institutional Support

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
The institution keeps my studying process up to date	7	5.4%	12	9.3%	31	24.0%	51	39.5%	28	21.7%	3.63	1.090	30%
The institution communicates to me in a timely manner	11	8.5%	20	15.5%	34	26.4%	46	35.7%	18	14.0%	3.31	1.151	35%
I access study materials in a timely manner	10	7.8%	19	14.7%	39	30.2%	44	34.1%	17	13.2%	3.30	1.115	34%
The course materials are appropriate and well designed	7	5.4%	13	10.1%	25	19.4%	56	43.4%	28	21.7%	3.66	1.093	30%
Overall	**9**	**6.6%**	**16**	**12.1%**	**32**	**24.7%**	**49**	**38.0%**	**22**	**17.2%**	**3.47**	**1.112**	**32%**

Source: Survey Data (2022)

5.1.3.25   4.8.2.2 Quality and Relevance of Student Orientation

Examination of respondents' perceptions on quality and relevance of student orientation under study revealed that perceptions were high among ODeL students in HEIs (*M=3.69, SD=1.044*). Furthermore, the acceptable magnitude of the coefficient of variation (CV<30%) confirms that respondents were generally consistent in their perceptions of quality and relevance of student orientation (*CV=28%*). Generally, 62.7% (n = 81) of the respondents agreed that their perceptions of quality and relevance of student orientation were high. Specifically, user-friendly platforms (*M=3.78, SD=0.978, CV=26%*); general student orientation (*M=3.77, SD=1.057, CV=28%*); ease of interaction with technology (*M=3.75, SD=1.061, CV=28%*); provision of digital literacy (*M=3.67, SD=0.917, CV=26%*); and ease of interaction with content on the online platform (*M=3.66, SD=1.042, CV=28%*), were aspects of quality and relevance of student orientation perceived to be more appealing than the range of devices provided to access content (*M=3.51, SD=1.167, CV=33%*) (Table 4.17).

Table 4.17: Descriptive Statistics for Quality and Relevance of Student Orientation

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
The institution offers general orientation to students	5	3.9%	12	9.3%	24	18.6%	55	42.6%	33	25.6%	3.77	1.057	28%
The institution offers digital literacy to students	3	2.3%	10	7.8%	41	31.8%	48	37.2%	27	20.9%	3.67	0.971	26%
I find interaction with technology easy	3	2.3%	16	12.4%	26	20.2%	49	38.0%	35	27.1%	3.75	1.061	28%
There are a wide range of devices that I use to access content	8	6.2%	19	14.7%	29	22.5%	45	34.9%	28	21.7%	3.51	1.167	33%
Online platform allows easy interaction with content	3	2.3%	18	14.0%	27	20.9%	53	41.1%	28	21.7%	3.66	1.042	28%
Platform used is user friendly as can be easily navigated	2	1.6%	13	10.1%	28	21.7%	55	42.6%	31	24.0%	3.78	0.978	26%
Overall	**4**	**2.8%**	**14**	**11.1%**	**29**	**22.3%**	**51**	**39.3 %**	**30**	**23.4%**	**3.69**	**1.044**	**28%**

Source: Survey Data (2022

5.1.3.26   4.8.2.3 Use of Technology

Examination of respondents' perceptions on the use of technology revealed that ODeL students in HEIs had high perceptions (*M=3.87, SD=0.989*) about this aspect. Most of the students [43.8% (n = 57)] agreed that they held high perceptions about use of technology while 27.4% (n = 35) of the students strongly agreed they perceived use of technology highly (Table 4.18). Additionally, the acceptable magnitude of the coefficient of variation (CV=26%) confirms that students were consistent in their perceptions of use of technology. Notable aspects of use of technology that appealed more to the students were: technology enhancing knowledge (*M=4.00, SD=0.935, CV=23%*); technology improving the quality of teaching and learning (*M=3.98, SD=0.956, CV=24%*); a range of devices being available to access content (*M=3.89, SD= 1.017, CV=26%*); and technology being matched to teaching and learning activities (*M=3.82, SD= 0.956, CV=25%*). But an aspect of whether technology offers improved interaction and dialogue or not, received low student perceptions (*M=3.74, SD=0.956, CV=26%*).

A key element that was observed during interviews was use of technology. This was considered another element related to the lack of policies by the respondents indicated. The respondents indicated that the mode of ODeL delivery itself creates challenges based on their lack of previous exposure. The student respondents admittedly indicated:

> *As students we are not so much exposed to technology, use of smartphones and computers for learning hence failure to cope. Coupled with this is the poor internet connection and intermittent power supply in the institutions. In addition, we were taking ODL as something which will give us as students more time to study at home or away from the institution as regards its name Open Distance while the actual experience has proved different in that we spend a lot of time on campus hence a departure from initial expectation [FGD M2 student (May 30, 2022)].*

One of the managers referred to technology as one of the elements that could contribute to the low perception of its interactivity depending on attitude of personalities:

> *May be the problem could be the utilization from the students themselves as well as the facilitators. Some are really utilizing it well, they put in interactive content, video lessons, and they also try to engage students, but for some they still experience problems despite that as ODL we organize training sessions [Manager L (May 20, 2022)].*

Table 4.18: Descriptive Statistics for Use of Technology

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
A range of devices can be used to access content technologically	4	3.1%	10	7.8%	20	15.5%	57	44.2%	38	29.5%	3.89	1.017	26%
Use of technology offers improved interaction and dialogue	3	2.3%	12	9.3%	26	20.2%	63	48.8%	25	19.4%	3.74	0.956	26%
Technology is matched to teaching and learning activities	2	1.6%	11	8.5%	27	20.9%	57	44.2%	32	24.8%	3.82	0.956	25%
Technology is enhancing my knowledge	3	2.3%	6	4.7%	20	15.5%	59	45.7%	41	31.8%	4.00	0.935	23%
Technology is improving quality of teaching and learning	3	2.3%	6	4.7%	24	18.6%	54	41.9%	42	32.6%	3.98	0.956	24%
Technology does not give me a sense of fear, anger or helplessness	9	7.0%	6	4.7%	27	20.9%	50	38.8%	37	28.7%	3.78	1.127	30%
Overall	**4**	**2.7%**	**8**	**6.3%**	**24**	**18.5%**	**57**	**43.8%**	**35**	**27.4%**	**3.87**	**0.989**	**26%**

Source: Survey Data (2022)

5.1.3.27   4.8.2.4 Connectedness to Other Students

Connectedness to other students was perceived highly among respondents. The overall mean response and associated standard deviation (*M=3.56, SD, 1.096*) indicated that most ODeL students in HEIs agreed [55.8% (n = 72)] they were happy with the level connectedness they established among themselves (Table 4.19). However, there was poor and high variability of perceptions of connectedness to other students (*CV=31%*) signifying that respondents were inconsistent in their perceptions. Students were particularly impressed with among other connectedness attributes; platform promoting higher level of thinking (*M=3.79, SD=0.990, CV=26%*); peers being supportive (*M=3.77, SD=1.035, CV=27%*); platform allowing online sharing of knowledge with peers (*M=3.65, SD=1.164), CV=32%*) platform allowing easy interaction with peers (*M=3.64, SD=1.166, CV=32%*); and students finding study circles beneficial (*M=3.57, SD=1.117, CV=31%*). However, an aspect of platform allowing monitoring of one another's work, received low student perceptions (*M=3.22, SD=1.161, CV=36%*).

The theme that emerged from qualitative data analysis related to connectedness is creation of learning communities among students. The managers indicated that as centers they have made the environment conducive and interactive because of the adoption of the Moodle LMS which has made connectivity easier. The managers create databases of students per district, per program just to alert students that they are not alone where they are and that they can use that as an opportunity to meet whether online or physically. One manager indicated:

> *When we talk about this Moodle thing it has got several features and it allows that kind of interactivity. And as for the learner/learner interaction, what we do is encourage students to form study circles, and they also have their own WhatsApp groups for the whole class, so that helps them not to feel isolated and to interact. Study circle means you have learnt on your own as an individual and now you want to discuss with others*

to enhance the individual learning. So, learners do not need to meet physically in order for

them to interact unless they just want to do so [Manager B (May 18, 2022)].

Table 4.19: Descriptive Statistics for Connectedness to Other Students

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
Platform allows easy interaction with peers	6	4.7%	19	14.7%	26	20.2%	43	33.3%	35	27.1%	3.64	1.166	32%
Platform promotes higher level of thinking	4	3.1%	11	8.5%	22	17.1%	63	48.8%	29	22.5%	3.79	0.990	26%
Peers are supportive	5	3.9%	7	5.4%	36	27.9%	46	35.7%	35	27.1%	3.77	1.035	27%
Platform allows online sharing of knowledge with peers	6	4.7%	18	14.0%	27	20.9%	42	32.6%	36	27.9%	3.65	1.164	32%
Platform allows evaluation of each other's ideas	5	3.9%	20	15.5%	38	29.5%	41	31.8%	25	19.4%	3.47	1.090	31%
Platform allows monitoring of one another's work	8	6.2%	28	21.7%	43	33.3%	27	20.9%	23	17.8%	3.22	1.161	36%
Gives feeling of connectedness to other students	3	2.3%	21	16.3%	34	26.4%	50	38.8%	21	16.3%	3.50	1.024	29%
Allows easy participation in online study circles	5	3.9%	26	20.2%	30	23.3%	43	33.3%	25	19.4%	3.44	1.131	33%
I find study circles beneficial	6	4.7%	19	14.7%	27	20.9%	50	38.8%	27	20.9%	3.57	1.117	31%
Overall	**5**	**4.0%**	**17**	**13.6%**	**31**	**23.9%**	**44**	**34.1%**	**28**	**21.7%**	**3.56**	**1.096**	**31%**

Source: Survey Data (2022)

5.1.3.28   4.8.2.5 Interaction and Communication with Tutors and System

Respondents were required to indicate their level of agreement with their perceptions on various aspects of interaction and communication with tutors and system. The overall mean response score, together with the associated standard deviation (*M=3.62, SD=1.195*) indicated generally students' agreed on average in terms of having positive perceptions about aspects of interaction and communication with tutors and system in HEIs under consideration (Table 4.20). 59.5% (n = 76) of respondents expressed their agreement. However, *CV=31%* indicated that there was inconsistent and wide variation of perceptions among ODeL students. Students generally agreed on some of the aspects such as; platform allowing provision of recorded student grades (*M=3.81, SD=0.953, CV=25%*); platform reducing recurring incidences of lost scripts (*M=3.74, SD=1.057, CV=28%*); and platform allowing tutors to give timely feedback on assignments and examination results *(M=3.57, SD=1.138, CV=32%)*.

During interviews on interaction with lecturers, the main theme was the instructional process. The respondents indicated that normally facilitation takes place close to exams when semester is going towards an end, while they wish if it was done at intervals and through face-to-face interaction. The respondents further indicated:

> *Due to COVID 19, some lecturers have taken advantage since delivery of content is completely online. There is lack of communication between the lecturers and class representatives before facilitation starts since as students, we are not aware as to who will take them through a course, unless the lecturer unveils himself or herself, hence there is no bridge between students and lecturer to facilitate student/lecturer interaction at class or course level [FGD L student (May 20, 2022)].*

Table 4.20: Descriptive Statistics for Interaction and Communication with Tutors and System

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
Platform allows easy interaction with tutors	7	5.4%	25	19.4%	27	20.9%	40	31.0%	30	23.3%	3.47	1.199	35%
Platform enhances two-way communication process with tutors	8	6.2%	17	13.2%	30	23.3%	47	36.4%	27	20.9%	3.53	1.146	32%
Platform allows tutors to give timely feedback on assignments and examination results	7	5.4%	16	12.4%	33	25.6%	43	33.3%	30	23.3%	3.57	1.138	32%
Platform reduces recurring incidences of lost scripts	4	3.1%	13	10.1%	30	23.3%	48	37.2%	34	26.4%	3.74	1.057	28%
Platform allows provision of recorded student grades	3	2.3%	8	6.2%	31	24.0%	56	43.4%	31	24.0%	3.81	0.953	25%
Overall	**5**	**4.2%**	**15**	**11.5%**	**30**	**23.4%**	**46**	**36.0%**	**30**	**23.5%**	**3.62**	**1.095**	**30%**

Source: Survey Data (2022)

5.1.3.29   4.8.2.6 Academic and Non-academic Support

Respondents were asked to indicate their level of agreement with how they perceived the academic and non-academic support in HEIs. The overall mean response score together with the associated standard deviation (*M=3.38, SD=1.046*) indicated students were generally neutral about their perceptions of academic and non-academic support provision in HEIs. There was some acceptable level of consistency in students' perceptions of academic and non-academic support (*CV=30%*). Overall, the proportions of students who did not agree [16.6% (n = 21)] and those who opted to be neutral [29.0% (n = 37)] were rather considerable. On the other hand, 35.8% (n = 46) of the respondents agreed that the HEIs provided adequate academic and non-academic support, while 13.6% (n = 18) strongly agreed giving 49.4% (n = 64) (Table 4.21).

Table 4.21: Descriptive Statistics for Academic and non-academic support

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		*M*	*SD*	*CV*
	N	%	N	%	N	%	N	%	N	%			
The staff are available for your convenience to offer academic and non-academic support	4	3.1%	26	20.2%	37	28.7%	41	31.8%	21	16.3%	3.38	1.077	32%
The staff efficiency and willingness to help instils confidence in you	5	3.9%	17	13.2%	36	27.9%	54	41.9%	17	13.2%	3.47	1.008	29%
The staff give you adequate individual attention	5	3.9%	29	22.5%	41	31.8%	38	29.5%	16	12.4%	3.24	1.059	33%
There is immediacy of feedback and always try to address student requests as much as possible	7	5.4%	22	17.1%	37	28.7%	49	38.0%	14	10.9%	3.32	1.053	32%
The support offered gives me a sense of belonging to a meaningful learning community	5	3.9%	16	12.4%	36	27.9%	51	39.5%	21	16.3%	3.52	1.032	29%
Overall	**5**	**4.0%**	**21**	**16.6%**	**37**	**29.0%**	**46**	**35.8%**	**18**	**13.6%**	**3.38**	**1.046**	**31%**

Source: Survey Data (2022)

During interviews and FGDs, respondents were also asked their perception on quality and relevance of ODeL student support systems in the HEIs. The responses indicated that the student respondents have a neutral perception of the quality and relevance of OdeL student support systems in the HEIs. The main themes that emerged were bureaucracy and lack of autonomy which is aggravated by insufficient academic and administrative staff in the centres and at the main hub. They perceive that there are some times when they are supported as required but not always while also indicating the long time that the support takes to come in. They attributed such low perception to that exists within the institutions where issues on which students need support in the centres have to be referred to the main hub or even to the mother institution. One manager indicated that he has to refer and report issues to the Director since he has a delegated position:

My position is more of delegated, I report to the Director whose office is overwhelmed and cannot manage to reach out to each and every student. So, I work on behalf of the director making sure that the centre runs smoothly [Manager M2 (May 30, 2022)].

The respondents indicated that additionally there is lack of proper link between lecturers and ODeL management such that the students sometimes choose to defy protocol when seeking support. Due to the bureaucracy that affects the type of support that the students receive, one student respondent indicated that there are times when they have to defy reporting protocol:

I am better off going directly with issues to the administration of my department as compared to going with the issues to the ODeL; experience has shown that you repeatedly go over and over again to ODeL to be assisted but eventually you do not get any help; you keep on reporting and there is nothing done [FGD M2 student (May 30, 2022)].

On the other hand, respondent managers indicated that they offer as much support as they can in organising tutorials, guide students as to where they can possibly get an attachment opportunity; facilitate students' attachments by providing identification letters from the centre and the department. Another important area of student support which managers provide is administration for both mid and end of semester exams. As such, respondent Managers indicated that their roles and responsibilities include running the general operations of the centres, checking that learning activities are well organized, drawing a calendar of activities and share it with students, acting as a link between the main campus and students in the centres, coordinating and offering different student support services including guidance and counselling services.

On the other hand, the students' respondents indicated lack of adequate and timely support on issues of missing grades and anomalies for both assignments and exams grades; delays in releasing or results not released for assignments; starting learning another semester or year without knowing previous semester or year's results; disappearance of fees payments and receipts; students being accused of not paying fees while the receipts were somehow misplaced. The respondents also indicated lack of financial support in paying fees for students who cannot afford on assumption that those who enrol in the mode are working and can ably support themselves financially. This is based on history that in the past it was mostly upgrading teachers who were using the ODeL delivery mode hence already employed and earning a salary of which part could be used to pay for their studies.

Another aspect of academic support respondents indicated was the interaction they have with lecturers, tutors and content. The respondents indicated that there are circumstances where they start a semester without knowing who is taking them through a particular course. Some lecturers stay quiet until the time of exams with no interaction (presentations) leading to student failure;

assignments are not given within a semester, and if given are not marked. The student respondents have a perception that quality of student support keeps on decreasing at an increasing rate. They lamented the cessation of tutorial sessions since the lecturers and tutors have taken advantage of the totally online mode. The respondents indicated that tutor and lecturer help through tutoring stopped 2 years back since the coming in of COVID 19. This is compounded by use of unfamiliar apps for learning other than Moodle, that is, Zoom and Teams have come during the COVID and poor communication on when a class is scheduled and the mode of delivery to be used. And on a positive note, when a student is struggling with something technological IT personnel are there to support and that support starts with taking students through the use of the Moodle Learning Management System (LMS) and student portal during orientation.

On the other hand, on academic support specifically on interaction with lecturers, the respondents also rated highly some lecturers who always want to interact with students, want to catch up and know how students' studies are going on. The respondents appreciated such lecturers as one respondent indicated:

> *There are some few other lecturers who are active in using the LMS and provide material and guide students where to get other stuff and material; students are able to get some information on their own to supplement the information they get from these lecturers; students get videos on YouTube using ODL internet and gain some more useful information based on the assistance they get [Manager M1 (May 27, 2022)].*

On non-academic support student respondents rated it positively as they indicated that when they have personal issues, they consult either their centre coordinators or administrators who always come in to help. They appreciated that staff in the centres are always ready to help students even when they are at the verge of giving up on their studies. They are there to motivate

students to actually go on, and finalise their studies. However, the respondents indicated that there are some students that need psychological support but have challenges on who to present their issues to since they do not know who is responsible for offering such support within their institution or in some cases there are feelings that the issues might be better be presented to a person of the same gender than involving one of the opposite genders**.** While underscoring the importance of psychological support one student commented:

> *When one starts learning in a new semester without knowing previous semester results, this leads to psychological trauma. The same applies when there is a change of dates for starting the semester without proper explanation leading to lack of concentration. This automatically leads to concerns on the cost of study and easily leads to failure [FGD K student (June 7, 2022)].*

4.9 Successes, challenges, opportunities and lessons learnt in student ODeL mode utilisation

The third objective of the study aimed at identifying successes, challenges, opportunities and lessons that can be learnt in student ODeL mode utilisation in higher education institutions. Hence, the respondents were asked to identify these elements in ODeL utilization among students in the HEIs.

4.9.1 Successes

In analysing the qualitative data collected on successes of the ODeL delivery mode in order to establish perceptions that students have on the learning mode, two main themes and subthemes under each main theme emerged and these are:

Broadened Access

Increase in number of programs and intake: The managers indicated that they consider the graduation of students as one major success in ODeL mode utilisation. One institution which started with 4 programs but has 8 programs currently with more departments and faculties willing to offer their programs under ODeL. And throughout the years they have managed to increase intake from 400 at the initial start to 1700 this current year since they are attracting more students and their courses have a high demand though the numbers are not growing as expected. One of the managers attributed improved public perception of ODeL and coming in of COVID 19 as factors influencing the successes:

> *People have now started accepting that in a way ODeL is same as regular learning on campus. This is because students have started learning the same content, taking the same exams and it remains a fact that all students are getting the same degree at the end of their studies despite learning under different learning modes [Manager M1 (May 27, 2022)].*

One manager indicated that they have registered success since they have had 3 graduation ceremonies for ODeL students while the fourth cohort had just finished their studies awaiting graduation.

Enhanced Flexibility:

Migration from manual based to computer-based management: The respondents indicated that they started with paper-learning resources like modules which the institutions had to print and sell to students which was a lot of work. But later the institutions migrated to using a Learning Management System which is less labour intensive and has made learning closer to the student and exciting for both providers and students. One manager indicated:

The time we were starting ODeL, we were doing everything manually and then we had to migrate to the use of Moodle. We manage to teach the students using the LMS. And even the lecturers who were at first expressing reservations in teaching at ODeL, they are now able to embrace ODeL and also to teach using Moodle, and also even to teach at ODeL [Manager M2 (May 30, 2022)].

Opening of satellite centres: This is one of the notable successes as it has made the ODeL system more recognisable, open, as it can be used whenever, wherever and for whatever is required in their studies and fully concentrate. The respondents were glad that they were able to use the ODeL facilities, computers and other equipment at their disposal at their own time when they have chance. The satellite centres have led to the reduction of distance from home to main hub to the students' advantage.

Technical support: Since almost 90% of everything is technological and done online using smartphones and computers, coupled with admin support is the support offered by ICT personnel. They are there to help and provide guidance on registration at the start of each and every semester and guide students on how to access other study resources or materials especially in the satellite centres than in the main hubs. That includes assistance in uploading assignments, reversal of wrong uploads. In terms of use of technology, this is also considered a success as respondents indicated that there are computers and Wi-Fi available all day for the whole semester in centres.

A respondent at one of the centres pointed having computers as one of the successes indicating:

At this centre there are 31 computers for +/- 250 students some of whom do not visit the centre and do not need to use them all the time. This has led to moving from accessing learning resources and submission of assignments through email to Moodle. When one

has submitted an assignment through Moodle it gives assurance that it has been received by the intended recipient [FGD K student (June 7, 2022)].

Grading system changes: Another success indicated by respondents is the introduction of supplementary exams after a student has not done well in the initial exam. The respondents indicated that at first were just being advised to have carry overs in case they failed an exam on the first attempt, hence very difficult and expensive since they had to make extra payment for those carry over courses. This resulted in increased course load in some cases where a student has carried over from 2 semesters and in which case, they were supposed to pay K60,000 extra for each course increasing study costs.

Calendar harmonisation: Respondents have indicated harmonisation of calendar with face-to-face students as one of the elements they also consider a success. The semesters that used to be 6 months long or more have been reduced to 4-month semester and as a result of the harmonisation, exam results are being released in good time. One respondent commented on the semester experience indicating that in as far as the schedule and academic calendar is adhered to, it could have a positive effect on students' movement from one level (cohort) to another unlike what other students have experienced in the past:

We used to have a 6-month semester and there was a time students had a semester that lasted the whole year in 2020- and 6-month holiday contributing to failure and drop out. There was a moment I had to stay for almost a year waiting for another cohort so that I can join, it's like I failed a semester and then I had to wait for another year so that so that I should join another cohort because at the time results were being released the semester that I was supposed to join was already on going [FGD M2 student (May 30,2022)].

4.9.2 Challenges

The respondents were asked to indicate the challenges they face in the utilization of the ODeL delivery mode in their institution. In analyzing the data collected the following themes emerged:

Individual Challenges

High cost of study: The respondents indicated expenses related to travel which are overhead costs apart from fees. The respondents indicated that failure to raise tuition fees and other costs related to their studies and the unstable calendar that have led to other students dropping out. The minimum amount of tuition fees at one of the institutions offering ODeL is K350,000.00 per year while it might go over that based on institution, program and other related costs. Even though students are assisted in reserving a place to come back after a semester in some cases, they are unsuccessful in sourcing the fees by themselves such that they do not have much choice but dropout. The actual drop-out figures have not been established by the institutions since it is more pronounced when the students are registering to sit for exams because that is when they are supposed to clear fees balances. This is when the administrators discover that the enrolment figures have gone down. According to the respondents this is compounded by the circumstance that ODeL students are denied access to student loans. The managers indicate that drop out is a big issue that needs further research since the actual reasons apart from failure to raise fees have not been established as one manager designates:

> Sometimes these students might just drop out without giving a proper reason or even letting us know why they did that. We follow up but see that they are not even picking up the phones. Sometimes they leave us in an awkward situation to say what is it with this student. Is it probably to do with us or the student or what is really happening? Of course, sometimes they complain about the fees but as far as we are concerned at least

101

the ODeL is the cheapest but still some of them complain of the fees [Manager M1 (May

27, 2022)].

Related to the expenses are recurring false fees balances some running to 3 or 4 years back. The respondents indicated that the first cohort of students at an institution were denied being given their degrees on the basis that they had fees balances from first year up to fourth year which is impossible. In some cases, students are not allocated supervisors for projects at third year and there are delays in issuing the attachment reference letters to institutions due to uncleared fees balances in the system. The respondents indicated that even though the mode of fees payment changed to paying using online platform or even through bank account and updated through the portal, students are still facing challenges of checking if their balances have been cleared close to the exams. This is the only time institutions are busy updating the portals to clear false balances, and overpayments from their accounting systems. Therefore, students waste time following up fees' clearances during grace week affecting preparation for exams. Those in main hubs have to stand on line for 3 to 4 hours waiting to be cleared on fees balances in order to sit for exams.

COVID 19: The respondents indicated another challenge as the effects that COVID 19 has had on the ODeL delivery mode utilization. They indicated that after COVID 19 started spreading, their studies have switched completely to online learning, without any physical facilitation. Lecturers have just taken advantage of the situation in that initially when every semester started students used to go to the hub for facilitation for 2 weeks. The lecturers used to give students tutorials especially close to exam time on topics students were finding problems in as one of the students indicated:

During the period there was purely online facilitation affecting levels of interaction and

communication between facilitators and students resulting to exams and assignments

102

missing grades and results anomalies. Results were released late and calendar became

unstable [FGD L student (May 20, 2022)].

Furthermore, there are some lecturers who are reluctant to use Moodle so that they do not upload materials in the LMS on time. Such lecturers report for tutorials in the grace week period while students are preparing for exams and start administering the lectures on Moodle. This means that the students are not given assignments as continuous assessment that contribute 40% to the end of semester result and 60% is final examination making a final grade of 100%. This entails that the lecturer has not introduced self and not given any assignment thus affecting students' GPA because they consider themselves as doing much better in assignments. Students were thus instructed to concentrate on topics that would be covered during exam in order to pass rather than studying for knowledge's sake.

Quality and quantity of study resources:

Lack of necessary facilities and staffing: Another challenge that respondents indicated is lack of reliable electronic libraries and other study resources in the institutions. The respondents indicated that the library systems in the institutions are not properly configured so that students can borrow books with ease in the satellite centers and the same can be reflected at main hub in the main library system. In the existing libraries or resource centers the materials are outdated and students lack of guidance on what resources to use due to lack of competent staff. A student respondent indicated:

There is a lack of reliable electronic libraries and other study resources in the

institutions. The working hours in the resource centers need to be extended [FGD K

student (June 7, 2022)].

Usually, the center managers who do not know which book should be used for which course are the ones that try to offer such guidance as they perform all the roles and responsibilities in the centres:

> *As centre managers we perform all the roles offering operational, financial, administrative and technological support to the ODeL students [Manager K (June 7, 2022)].*

Unstable calendar: The managers indicated having an unstable calendar as one of the major challenges. They indicated that as institutions following the ODeL delivery mode fail to follow their academic calendar. One manager designated:

> *While the system is supposed to follow the semester approach, one finds that students have finalized the first semester, yet they cannot proceed to the following semester without the release of results for the preceding semester. Papers are not graded on time so that students should move to another semester. This is the case since ODeL does not have own staff to teach but uses the very same lecturers who were employed to teach under face-to-face. As a result, it affects students instead of spending four years studying, all things being equal, they spend five or six years [Manager M1 (May 27, 2022)].*

Examination administration: Examinations and assignments missing grades and results anomalies is another challenge that respondents keep on facing. The respondents indicate that there are situations where a student proceeds to the next level while not knowing that a student has to sit for a supplementary exam at the previous level. There are also other cases where a student proceeds to the next level while not knowing that he or she has been withdrawn.

One student lamented:

Exams and assignments are not graded on time and released with missing grades and results anomalies leading to late opening of a new semester [FGD L student (May 20, 2022)].

Subservience to face-to-face experiences and decision making: Another challenge that the managers indicated was that decision making in ODeL is based on the practices derived from the face-to-face experience other than needs of online teaching and learning. A good example, was that when ODeL staff noted that most students especially those who are working are finding it very heavy to carry seven or eight courses per semester, they proposed using the wallet arrangement as a way of allowing for flexibility in assisting ODeL students to have a lighter load. In this wallet arrangement, students who would not manage to take all the eight courses would have been doing courses little by little by breaking semester work into two. In the first semester a student could have been doing four courses and then keep results until the student does the remaining portion after which it was going to be determined whether the student had passed or not and move to the second semester. In other words, what it meant was that a student would have been doing the year's work in two years.

One manager expressed a concern indicating:

In ODeL students can go up to a maximum of eight years of study for a four-year degree program as stipulated in NCHE guidelines, considering the manner in which the students under the learning mode study the courses. This arrangement was rejected and abandoned by the institutions that had already started implementing it and some students who had started it were frustrated and withdrew. The reasons that were advanced for the rejection and abandonment was that it was going to present academic dis-organization and lead to devaluing standards of higher education [Manager B (May 18, 2022)].

4.9.3 Opportunities and Lessons Learnt

Respondents were asked to indicate the opportunities that exist that can be taken advantage of and lessons that have been learnt in the utilization of ODeL delivery among students in the HEIs. The following are the themes that emerged from qualitative data on opportunities and lessons learnt:

Access and Independence: The respondents indicated that the ODeL delivery mode has provided an opportunity to students who could not have had a chance to enroll and study in higher education especially those who are working or doing businesses. The learning mode has provided them a chance to study through access to technology for learning; it has contributed to improved knowledge to source information on the internet using smartphones and computers. The student respondents further indicated that they had learnt that the ODeL delivery mode reduces a dependency theory of students on lecturers as it encourages independent studying where one can actually take personal initiative to search for information and manage own individual study time as one student indicated:

> *ODeL is making a contribution to improved knowledge and taking personal initiative to source information on the internet through reduction in a dependency theory [FGD M1 student (May 27, 2022)].*

Growth: Respondents had a perception that management in all the institutions that offer studies using the ODeL mode are underutilizing the mode. One student respondent underscored the need for more utilization of the mode:

> *Our institution offers 4 programs only. These programs have a very high potential in bringing changes in the Malawian community. Therefore, the institution should not only look at enrolling more students but also increase the number of courses and intake*

(number of students) every cohort. The institution can also utilize those graduating to market the mode to prospective students; use current students and alumni as ambassadors for the learning mode [FGD K student (June 7, 2022)].

Another opportunity that both students and managers recognized was use of satellite centers to offer short courses as a way of generating more funds for running the centers as well as avoiding the underutilization.

They should not only look at enrolling more students but also increase the number of courses and intake (number of students) every cohort. They should also explore the possibility of conducting short/weekend courses especially for those who are working [FGD K student (June 7, 2022)].

COVID 19: The managers referred to the COVID 19 as an opportunity since it was a good tool that has forced institutions to change attitude, recognize, adopt and utilize online learning delivery mode. The respondents further added that ODeL can be viewed as an area of great potential of growth for higher education. It can raise funds for running its own operations and the operations of universities as entities. As such institutions using the mode should consider partnering with each other and invest in opening of more satellite centers in the districts possibly at district secondary schools' campuses. The respondents indicated that Moodle LMS can be used to introduce different ways of teaching in these centers as it is user friendly.

COVID 19 has been a good tool that has forced institutions to change attitude, recognize, adopt and utilize online learning delivery mode [Manager B (May 18, 2022)].

4.10 Interventions for improved ODeL student experiences

The fourth objective was to establish interventions for improved ODeL student experiences in higher education institutions. These are the interventions that the respondents perceived as potential areas where ODeL students' experiences could be improved. The thematic areas are:

Learning environment: The first intervention for improved student experiences that respondents indicated was improvement of the learning environment. They proposed improving institutional facilitation conditions by constructing own centre campuses for those institutions that are renting to counter movements/"flexibility" of students since its done due to prevailing centre conditions. These conditions include noises and lack of other facilities like library and other recreation facilities which they described:

> *There is need for our own purposely constructed campus (satellite centre) since these rented premises are not situated at a convenient place for learning. It is too noisy here. The space does not allow for establishment of facilities like the library and recreation [FGD L student (May 20,2022)].*

They respondents also proposed avoidance of use of ODeL designated campuses for ODeL unrelated activities at the expense of ODeL student activities that leads to inconveniences like ODeL students allocated rented rooms off their campus to sit for exams.

Library and other learning resources: The second intervention that respondents proposed was on availability and use of library and other learning resources. The respondents indicated:

> *It could have been better if we had a platform on internet like an electronic library where we could have been accessing books and download them to be available for continuous*

use afterwards instead of going to the centre every time, we need to access a book [FGD

K student (June 7, 2022)].

The respondents proposed an increase in working hours in the centres so that students can make the most out of the equipment and resources that are available there for use. According to the respondents currently the centres open around 8am and close at 5pm but they wish they could extend till 7pm.

Instructor/student interaction: The third area that the respondents proposed an intervention on, was lecturer student interaction. They indicated that the institutions should bring back face to face facilitation in the first two weeks of study, tutoring when need arises and reintroduce monthly meetings that were stopped due to COVID 19. The proposed intervention should include checking lecturer's progress in the course of work. The institutions should improve and take into consideration student evaluations of the lecturers that are done at the end of a semester and give necessary feedback. The lecturers should devote their time fully to ODeL and be conversant with how to use the LMS Moodle. The use of audio-visual recordings for lecturing at main hub and sharing the same with those in satellite centres for similar student experiences in terms of course coverage should be encouraged. One student indicated:

The idea of having satellite centres was that there would be some times when the

lecturers will be teaching here and learners will be accessing resources in satellite

centres using the video conferencing systems but up to now it is just a dream [FGD K

student (June 7, 2022)].

In addition, in relation to lecturer student interaction, respondents proposed that lecturers should have tutorials in different centres not just at the main hub. In case that is not possible they should record Zoom meetings and deliver it on other platforms like Moodle (which is the recognised learning platform) and WhatsApp so that students who did not attend that particular tutorial can

access the lecture notes. The respondents indicated that lecturers work on an assumption that all the students have access to affordable internet each and every time they want to offer Zoom meeting or Teams. On project presentations the respondents proposed that alternatively each lecturer could be travelling from the hub to the respective centres to make the process easier rather than so many students traveling from centres to main hub as distance and expenses matters.

The respondents also proposed that student treatment should not vary depending on the mode of study the students are utilising so that the feeling of inferiority exacerbated by lecturer treatment, the feeling of being neglected and less prioritised could be minimised. One of the respondents re-echoed the different experiences in treatment that the students face just because they are studying using the ODeL delivery mode:

> *As ODeL students, continuous assessment is limited to assignments, mid-semester exams and the end of semester exams while counterparts usually have quizzes and individual exercises that earn them a little mark that at the end contributing to their end of semester grade [FGD L student (May 20,2022)].*

The student respondents also proposed is reintroduction of monthly meetings where students would have more voice on changes, they would like to see taking place, for example, change of exam timetable, continuous assessment.

Communication: The fifth intervention proposed was improved communication. The respondents proposed timely communication of the agenda when calling for meetings at the centres or main hub, changes in classroom scheduling and exam timetable as follows:

There is need for timely communication of the agenda when calling for meetings at the centres or main hub, changes in classroom scheduling and exam timetable [FGD K student (June 7, 2022)].

They perceive presentation of class problems (lecturing, exam issues, difficult topics) through class representatives as long and bureaucratic. They indicated that sometimes it depends on whether the class representative also views that as a problem or not for him/her to present it to the concerned parties. Respondents proposed solving problems as soon as they are presented, for example, difficult topics that need tutorials. They indicated that they have experiences where there is piling up of topics that are presented as difficult to students till a week or 2 close to exams (grace week) to organise tutorials thus disturbing exam preparation. In the same vein, they proposed that decision making should be decentralised to ODeL management. This would entail increasing the number of staff members and take gender issues into consideration when recruiting for non-academic support.

Technology: The sixth area of proposed intervention is technology. On the one hand, managers proposed improvements in technology so as to improve access of materials to students:

The institution is supposed to invest more in technology. The idea of having satellite centres was that there would be some times when the lecturers would be teaching here and learners will be accessing resources in satellite centres using the video conferencing systems but up to now it is just a dream. If we could invest in it, it is going to be a breakthrough and solution to most of the challenges that we have [Manager B (May 18, 2022)].

On the other hand, student respondents proposed more batteries for keeping power in the computer labs and increasing the number of computers to cater for the high demand especially in the main hubs. They also proposed an increase in the internet bandwidth to aid internet speed

to help those who do not have personal gadgets to download tutorial videos and watch since smartphones do not have enough space to keep all the videos one downloads. In addition, another intervention that they proposed is connecting student gadgets to Moodle so that they can use it for free since data bundles are expensive and students cannot use centre computers at the centres all the time.

Study cost: The last area of proposed intervention was tuition fees and other study expenses and lamented lack of consideration for student loans and paying in instalments. The respondents indicated that the cost of study is high due to other related study costs apart from tuition fees like purchase of smartphones and laptops and purchase of data bundles. They proposed that their institutions should facilitate access to student loans because even though tuition is considered cheap, there are other related costs that should be taken into consideration. The respondents had their own speculations on why loans are not accessible to ODeL students. Two student respondents indicated:

> *Loans Board does not consider ODeL students when offering loans. We take 5 years to complete our school so they only focus on 4 years. At the same time, they also consider students studying using the ODeL mode as working class so as assuming that all can afford the tuition and can easily afford other related study costs [FGD K student (June 7, 2022)].*

Lastly, the respondents proposed that the Ministry of Education should recognise the ODeL delivery mode more. The Ministry should lead in this recognition and make sure that policies are developed at Ministry and institution levels so that related study issues of technology, internet, network among other things are resolved.

CHAPTER 5: DISCUSSION OF FINDINGS

5.0 Overview

This chapter presents summary of the research findings presented in the preceding chapter, discusses the key findings of the study on students' perception of utilization of ODeL delivery in public HEIs by elucidating how they are related to existing literature and previous studies.

5.1 Discussion of Findings

The main objective of the study was to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public higher education institutions. More specifically, the first objective was to establish institutional level characteristics and context of ODeL utilisation that facilitate student learning in higher education institutions. The second objective was to assess quality and relevance of ODeL student support systems in higher education institutions. The third objective was to identify successes, challenges, opportunities and lessons learnt in student ODeL mode utilisation in higher education institutions. The last objective was to establish interventions for improved ODeL student experiences in higher education institutions. Based on each of the specific objectives there were a number of variables/aspects that were used to investigate students' perceptions on utilisation of the ODeL delivery mode.

5.1.1   Institutional Characteristics and Context

Institutional level characteristics and context is considered one of the elements of ODeL utilisation that facilitate student learning in public HEIs. In order to investigate the perceptions that students have on institutional characteristics and context that facilitate student learning using the ODeL mode, the following indicators were explored: institutional facilitating conditions; learner centredness; and cost and affordability.

Based on the first specific objective on institutional characteristics and context, the findings suggest that perceptions on the aspect of institutional facilitating conditions in the HEIs were high with an overall mean response score (*M=3.51*) with associated standard deviation (*SD = 1.158*). On the aspect of learner centeredness, perceptions of learner centeredness were generally low (*M=3.40, SD=1.170*). On cost and affordability, the overall mean response score and associated standard deviation indicated low perceptions of cost and affordability of the ODeL delivery mode in HEIs (*M=3.34, SD=1.129*).

The quantitative data overall results reveal that students have high perceptions about the institutional facilitating conditions especially on access to institutional facilities, infrastructure supporting student learning and admin services. However, they have low perceptions on equipment supporting student learning. This was influenced by lack of technological equipment like smartphones and laptops among poor and vulnerable students who cannot afford to buy. Additionally, while one of the institutions promised that they were supposed to provide available tablets to such vulnerable students, the modalities of such an arrangement were not known to the students and the process has taken long. The respondents cited institutional set up and operations, where the institutional infrastructure is habitable though in a less conducive environment as a positive characteristic. However, the respondents indicated that the institutions have to use rented premises for examination administration and even for students' facilitation, giving a lack of a sense of belonging. In addition, qualitative data indicate that students have low perception on location of centres due to noise pollution. Therefore, the findings reemphasize the need for infrastructure, technology and equipment in ODeL as Venkatesh *et al*. (2013) posited that facilitating conditions including tangible elements like infrastructures, equipment and technology, as well as intangible aspects like the provision of training,

development and support for the users of technology, can influence the individuals' intentions to utilize certain technologies.

Similarly, Teo (2009) as well as Lin *et al.* (2013) also argued that appropriate infrastructures and the delivery of adequate training and support would probably entice the individuals' intentions to engage with educational technologies. The implication of these results is that the institutions are ably providing access to the institutional infrastructure, facilities, and administrative services which creates an environment that facilitate learning using the ODeL delivery mode. On the other hand, the low perception on equipment suggests that either the required equipment is not available for the students to use to their required expectation to facilitate learning or it is not available so that facilitators/tutors can use to facilitate learning that is distant in time and space both physically and psychologically. Online learning requires equipment apart from computers and smartphones to facilitate learning and these include equipment that can allow recording and distribution of lesson content and material using the learning platform, such as, Moodle.

The overall results based on quantitative data show that students had a low perception on learner centeredness. The aspect that contributed more to the low perception was provision of good quality learning while the perceived reduction of physical distance through utilization of ODeL study mode and the institution's promotion of ownership of what students learn were perceived quite highly. Furthermore, qualitative data reaffirms this finding in that physical distance has negatively affected the quality of learning in ODeL. Overall, the results suggest that respondents variably perceived the experience of learner centeredness provided by HEIs. Additionally, the proportions of respondents who did not agree and those who opted for a neutral position were quite large. A possible explanation on variability of responses of this result could be variability in students' definition of good quality learning in ODeL thus influencing their responses. Those who see continuous association as the educational ideal will generally define quality learning

in terms of the nature and degree of the two-way communication process. The nature of communication in ODeL utilization is mostly technological using online platforms synchronously or asynchronously leading to low degree of two-way communication. Therefore, the findings can be attributed to technologically facilitated education becoming a new phenomenon to students since they are used to the traditional way of learning using physical interaction where the two-way communication is real time hence differences in definition and low perception of quality of learning.

The overall findings on cost and affordability reveal that students perceived it lowly. Use of a range of devices to access content; benefits of spending time at the center; and the reasonableness of spending time at the center were predominantly perceived as aspects of cost and affordability that were more beneficial to the students. Nonetheless, the cost of travel to and from the center had the lowest perception score among students. Qualitative data findings also indicate unavailability of learning resources which students have to buy, high cost of studying and travel, and lack of clear institutional policies as factors for high cost which students find hard to afford. Concurring with the findings is Prinsloo (2016) who indicates that it is also crucial to remember that distance education has traditionally been seen by policy makers and regulatory bodies to optimize economies of scale resulting in reduced costs, without necessarily recognizing the cost of additional support needed by students and staff due to the widened access (Hülsmann, 2016; Rumble, 2014). Another important point to note is that there was a high and unacceptable variability of perceptions of cost and affordability among ODeL students in the quantitative data findings suggesting that respondents were not consistent in their responses. Additionally, the proportion of those that were neutral on perceptions of cost and affordability was rather large and of concern [21.4% (n = 28) just like the result under learner centeredness. The implication of this result is that there was indecisiveness among the

respondents. Thus, the neutral response conveniently provided an avenue to avoid expressing their opinions about the aspect, consistent with the views of TalentMap (2022).

5.1.2   Quality and Relevance of Student Support Systems

In order to quantitatively assess quality and relevance of student support systems the following were explored: institutional support, quality and relevance of student orientation, use of technology, connectedness to other students, interaction and communication with tutors and the system, and academic and non-academic support. The exploration of these aspects supports the view advanced by Simpson (2002) who found that support can be extended to include all activities beyond the production and delivery of course materials that assist in the progress of students in their studies which entails both academic and non-academic support. The overall findings suggest that perceptions on the aspect of institutional support in the public HEIs were low.

The first aspect on institutional support generally indicated low perceptions (*M=3.47, SD=1.112*). On the second aspect of quality and relevance of student orientation, the findings revealed that perceptions were high among ODeL students in HEIs (*M=3.69, SD=1.044*). On the third aspect of use of technology, the findings revealed high perceptions about this aspect (*M=3.87, SD=0.989*). Most of the students [43.8% (n = 57)] agreed that they held high perceptions about use of technology. The fourth aspect, under the second objective on quality and relevance of student support systems was connectedness to other students which was perceived highly among respondents (*M=3.56, SD, 1.096*). On fifth aspect, interaction and communication with tutors and system, the results indicated that the aspect was highly perceived (*M=3.62, SD=1.195*). The sixth aspect academic and non-academic support provision indicated students were generally neutral about their perceptions (*M=3.38, SD=1.046*).

Among the aspects of institutional support that were very impressive to the respondents in quantitative data findings based on their perceptions included: appropriateness and design of course materials and the updated studying process. Nevertheless, timely access of study materials was perceived the lowest by the students. Furthermore, there was poor and high variability of perceptions of institutional support provided to ODeL students signifying that respondents were not consistent in their perceptions. The findings of this study are consistent with the findings of Musingafi *et al*. (2015) who established that students felt institutional challenges greatly affected their performance and progress. Musingafi's *et al*. (2015) study further found that the institutional related challenges which ODeL students face in the course of their studies included delayed or lack of study materials.

The overall quantitative findings on quality and relevance of student orientation suggest that students perceived the aspect highly and were generally consistent in their perceptions. Specifically, user-friendly platforms; general student orientation; ease of interaction with technology; provision of digital literacy; and ease of interaction with content on the online platform, were aspects of quality and relevance of student orientation perceived to be more appealing than the range of devices provided to access content. The demographic profile of students indicated that the majority (69%) use smartphones seconded by computers (26%) as technological devices. The findings are corroborated by findings by Porter *et al*. (2016) who argue that majority of African students might access internet and related education content on their mobiles.

However, Porter *et al*. (2016) are quick to caution that it is important that the harmful impact such as addiction to smartphones is also taken into consideration while formulating policy especially for school going students to ensure better educational outcomes. This result can be attributed to students having no alternative means but to buy smartphones for use due to their less expensive cost compared to other devices especially laptops while compromising on the

quality of use and the amount of information that can be stored on the devices. Worth noting is that though less expensive, smartphones do not have enough space to keep study materials like videos for later use. This result also supports the sentiments expressed by student respondents admitting that as students they are not so much exposed to technology, use of smartphones, laptops and computers for learning hence failure to cope. Hence, the finding calls for the need for early exposure to technology in the other education levels, for example, secondary level and need of orientation on use of technology for learning upon enrolment into ODeL. These sentiments are consistent with views expressed by different authors indicating that in addition to technical equipment, students' previous experiences and common media usage behaviour (O'Brien & Verma, 2019; Zawacki-Richter *et al*., 2015), or their skills for the use of digital (communication) media (Hong & Kim, 2018) might impact students' experience of and engagement in digital learning (Kim *et al*., 2019).

The overall quantitative data findings on use of technology suggest that the students had a high perception. The finding concurs with the UNESCO 'Education 2030 Incheon declaration: Towards inclusive and equitable quality education and lifelong learning for all' launched in 2015 (UNESCO, 2015) that "foresees a central role for distance education by committing to a well-established, properly regulated tertiary education system supported by technology and could narrow the gap between what is taught at tertiary education institutions, including universities, and what economies and societies demand" (p. 13). Notable aspects of use of technology in ODeL utilization that appealed more to the students were: technology enhancing knowledge; technology improving the quality of teaching and learning; a range of devices being available to access content; and technology being matched to teaching and learning activities. This is consistent with Laurillard (2001) who argues that it is important for educational technology-based resources be appropriately matched to both teaching and learning activities

and educational technology interventions should be shaped by educational needs as opposed to technological concerns.

On the other hand, an aspect of whether technology offers improved interaction and dialogue or not, received low student perceptions. At the same time, qualitative data findings indicate lack of previous exposure, poor internet connection and power outages affecting interaction and communication. These finding ascertains suggestions that there are dangerous paradoxes technology leaders must face and learn to lead through one of which is that technology can improve the interaction and dialogue between teachers and students, resulting in improved teaching and learning but it can also isolate, marginalize, and reduce effectiveness in the classroom. This paradox is further supported by the view that, for example, compared to face-to-face teaching, students enrolled in online courses show a significantly higher level of technology-related fear, anger, and helplessness (Butz *et al*., 2015) which is inconsistent with the study findings on sense of fear, anger and helplessness. Perceived interactivity refers to the extent to which individuals perceive that existing technologies would allow them to feel in control when they communicate with others (Chattaraman *et al*., 2019; Liu, 2003). The efficacy of interactive communications is based on the immediacy of feedback, multiple cues, language variety and personal focus (Chen *et al*., 2007). In addition to technical equipment, students' previous experiences and common media usage behaviour (O'Brien & Verma, 2019; Zawacki-Richter et al., 2015), or their skills for the use of digital (communication) media (Hong & Kim, 2018) might impact students' experience of and engagement in digital learning (Kim et al., 2019).

Of importance are aspects of digital (in)equality with respect to the availability of technology and the skills needed for its effective use; as are, for example, spaces that offer an appropriate learning atmosphere (Beaunoyer *et al*., 2020; Li & Lalani, 2020; Tam & El-Azar, 2020). The implication of the finding suggests the problem could be multiple-folds: the failure to utilize the

available technology properly from the students themselves; the facilitators to effectively and timely communicate with each other; and ICT personnel not being able to guide on use of such technology. Perhaps the institutions expect students to use certain technologies as a requirement to complete their educational program, whether they have the know-how or not; or like it or not. But ultimately the trick lies in identifying situations where educational technology will be appropriate, and identifying when and how to use it in improving educational outcomes (especially pass rates), enhancing and improving the quality of teaching and learning.

The overall quantitative finding on the aspect of connectedness to other students under quality and relevance of student support revealed that the perceptions of students were high although respondents were inconsistent in their perceptions as evidenced by the poor and high variability score of perceptions. Students were particularly impressed with among other connectedness attributes; platform promoting higher level of thinking; peers being supportive; platform allowing online sharing of knowledge with peers; platform allowing easy interaction with peers; and students finding study circles beneficial. However, an aspect of platform allowing monitoring of one another's work, received low student perceptions contradicting previous studies which established that computer mediated education enables students to search for solutions, to share online information with their peers, to evaluate each other's ideas (Lambić, 2016; Soflano *et al.*, 2015; Sung *et al.*, 2015).

Qualitative data findings show that creation of learning communities among students has facilitated connectedness. Research shows that online learning communities can help create a feeling of connectedness to other students and this may be seen as a resource for knowledge construction and knowledge growth (Akcaoglu & Lee, 2016; Cho & Tobias, 2016). But developing a learning community takes time and is only accomplished with conscientious effort (Beth *et al.*, 2015). Moreover, studies have shown that students' sense of belonging to meaningful online learning communities is related to the students' engagement and learning

achievement (Joksimović *et al*., 2015; Tomas *et al*., 2015). The finding can be attributed to the pace at which each student studies, students concentrating more on their personal achievement and doing individual work while they do not attach importance to share online information with their peers, to evaluate each other's ideas. Additionally, although they have created learning communities in the form of study circles, the study circles are discussion groups that are usually convened physically to discuss what individuals have learnt on their own with others to enhance the individual learning.

Students had a high perception of interaction and communication with tutors and the system based on quantitative data findings. However, there was inconsistency and wide variation of perceptions among ODeL students. On the other hand, qualitative findings show students having a low perception on instructional processes due to lack of timely access to instructor and content. The online learning literature is largely univocal about the importance of interaction (Anderson 2003; Lou *et al*. 2006; Sutton 2001). Therefore, it can be appreciated that other factors like time and availability of communication can affect the perceptions. Thorson and Rodgers (2006) maintained that the concepts of interactivity can be categorized into human-to-human, human-to-document, and human-to-system interactions. Consequently, the student-student and student-faculty interaction can be extended to include student-instructor, student-content and student-system interaction since ODeL involves teaching and learning that is complex and influenced heavily by technology.

Students generally agreed on some of the quantitative aspects of interaction and communication with the tutors and the system such as; platform allowing provision of recorded student grades; platform reducing recurring incidences of lost scripts; and platform allowing tutors to give timely feedback on assignments and examination results. On the other hand, while the platform allows for all these, there are delays that are faced in releasing the results including anomalies and missing grades whose cause can be attributed to lack of expertise in using the platform,

human error and negligence. This is consistent with Musingafi *et al.* (2015) who established ineffective and delayed feedback of students' assignments and examinations results, lost scripts and unrecorded grades as instructional related challenges students faced. This means that ODeL students in Malawian HEIs share similar experiences although they have high perceptions of some of the aspects of interaction and communication based on the platform used. This could be attributed to the movement from manual to technological record management in the Malawian institutions throughout the years. However, the students could not agree on platform allowing easy interaction with tutors and enhancing two-way communication with tutors. Interaction supports students in the cognitive, intellectual and knowledge issues of specific courses or sets of courses, and in the affective and organizational aspects of their studies. Hence, several pedagogical models are increasingly encouraging educators to blend face-to-face learning methods with technology-mediated instruction (Furió *et al.*, 2015; Ozkan & Koseler, 2009).

The concept of blended learning suggests that course delivery is carried out in-person and through online media (Gikandi *et al.*, 2011; Porter *et al.*, 2014; Thai *et al.*, 2017). It can be argued that these results have been influenced by the experiences that students have had due to COVID 19 with some lecturers taking advantage of the situation reducing the level of interaction and encouraging one sided engagement since delivery of content to certain cohorts of students is completely online which was started at the time when there were prolonged closures. The findings show a sense of unpreparedness in the institutions as the changes came in abruptly during the pandemic. Many HEIs migrated from traditional and blended teaching approaches to fully virtual and remote course delivery (Camilleri & Camilleri, 2021) in adapting to an unprecedented situation. COVID-19 triggered them to use these remote technologies to engage in two-way communications with their students (Aguilar, 2020) which they were not

prepared for. Since it was an abrupt and unprecedented change, this development resulted in both challenges and opportunities to students and educators (Howley, 2020; Araújo *et al.*, 2020), one of the challenges being one-way communication. Hence the platform could have what it takes to have easy interaction and two-way communication but the users especially facilitators/tutors are not taking advantage of such an opportunity. Therefore, the implication of the findings is that if the institutions would employ more of the blended mode, students' perceptions about interaction with tutors and system would improve as studies indicate that before the outbreak of COVID-19, many practitioners blended traditional learning methodologies with digital and mobile applications to improve learning outcomes (Al-Maroof *et al.*, 2021; Boelens *et al.*, 2018; Furió *et al.*, 2015). Furthermore, since this is a model that has been used by the institutions before the outbreak, it can as well be used as the cases of the COVID-19 outbreak are now going down since institutions already have the experience.

The quantitative findings show that students' perceptions were generally neutral and there was some acceptable level of consistency in students' perceptions of academic and non-academic support provision in the HEIs. The aspects of academic and non-academic support that students had a neutral perception on are: staff being available for students' convenience to offer academic and non-academic support; staff efficiency and willingness to help instilling confidence in the students; staff giving students' adequate individual attention; immediacy of feedback and staff always trying to address student requests as much as possible; and the support offered giving students' a sense of belonging to a meaningful learning community. This means that the students are not always supported as expected while in some cases it takes a long time for that the support to come in. This can be attributed to bureaucracy that exists within the institutions where issues on which students need support in the centres have to be referred to the main hub or even to the mother institution before a decision can be made. This is the case since the managers are

operating based on ODeL Directorate delegated positions. Among the list of roles and responsibilities that the managers have to perform is only acting as a link between the main campus and students in the centres but does not include making decisions on behalf of the Directorate or institution. Furthermore, qualitative findings indicate lack of sufficient academic and administration staff hence corroborate with neutrality in findings on academic and non-academic support.

There are three types of institutions under which ODeL operate in Malawi: the purposely-operating distance education institutions that are purely single system (open universities), those operating as a system within another system either as a normally designed hybrid-blended or dual mode or a dual mode system responding to environmental changes, operating as emergency remote learning. While the structure and organization of these subsystems differ considerably for these different models of distance education and training, it is anticipated that planning, management and administration and student support services are different in these different ODeL subsystems hence affecting student perceptions in different ways. Panda (2003) argues that irrespective of variations in provision and organization of distance learning, both government and institutional policies on placing distance education at either the centre stage or the periphery of educational planning are heavily influencing distance education planning and reforms. The public HEIs under study operate as a system within another system either as a normally designed hybrid-blended or dual mode hence dependent on the mother institution on making operational decisions and changing policies thus affecting students' perceptions. Therefore, the finding is consistent with Panda (2003) who opines that while open universities have benefited from considerable autonomy, dual-mode distance education institutions have been subservient to the policy of the conventional university hence further suggesting that governments should determine the comparative merits and limitations of single mode and dual

mode distance education before undertaking policy initiatives. The findings of neutral perceptions on academic and non-academic can also be attributed to low staffing levels in the ODeL satellite centres and system as a whole. There are cases where ODeL centre managers have to perform operational, managerial, administrative and technological support roles with only an intern as a support staff. This presents a bigger workload and affects their concentration on their critical roles and responsibilities. This implies that the institutions give low priority to ODeL in a dual mode since they were established to offer face-to-face conventional programs.

5.1.3 Successes, challenges, opportunities and lessons learnt

The third objective of the study was aimed at identifying successes, challenges, opportunities and lessons learnt in student ODeL mode utilisation in higher education institutions. The findings of the study reveal that students identified a number of successes that have been achieved, challenges that are affecting the ODeL system, opportunities that can be taken advantage of and lessons that can be learnt in ODeL utilisation in Malawian public higher education institutions.

5.1.3.30 Successes

The qualitative findings indicated that ODeL has achieved several successes in expanding the number of programs it is offering, increased intake and graduating cohorts of students. Another notable success was migration from manual based to computer-based management and opening of satellite centers. Harmonization of the calendar with face-to-face students, administrative support and introduction of supplementary examinations were the successes identified.

The findings on expansion of the number of programs ODeL is offering; increased student intake and a maximum of 3 cohorts of students graduating is consistent with Peters (2010) who enunciates that distance learning provides an opportunity to equality of educational opportunity

to people who may not have a chance of accessing higher education for one reason or another. Besides, since it became popular, online education has regularly been viewed from the perspective of a good-to-have alternative (Adedoyin & Soykan, 2020) to contribute significantly to the realization of equitable access while enhancing quality of education, which have been challenges over decades. The implication of these successes is that there has been a change in the general population's perception of ODeL mode of study and the coming in of COVID 19 led to growth in demand to use ODeL. It can also be attributed to changes within the institutions where faculty members have a change in perception such that they are willing to offer their courses through ODeL. Additionally, Nyandara (2012) indicates that distance learning gives freedom to learn anytime and anywhere as such reduces the gap in education by reaching remote, under-developed and marginalized populations. This shows that ODeL as a mode of study has potential for growth in terms of both number of programs on offer and student intake though the institutions are failing to absorb the numbers as expected due to other limiting factors like staffing levels and internet speed.

Another notable success was the opening of satellite centers which has lessened physical distance from the students' homes to the main center. This resonates with the definition that Open Distance and eLearning (ODeL). It constitutes any learning activities within formal, informal, and non-formal domains that are facilitated by information and communication technologies to lessen distance, both physically and psychologically, and to increase interactivity and communication among learners, learning sources and facilitators (Bozkart, 2019). The opening of the satellite centres by the institutions has made the ODeL system more accessible as students can study on their own time, at any location of their choice (home, work site or learning centre), and without face-to-face contact. The advantages of opening the satellite centres also includes use of the available infrastructure, facilities, equipment and access to

computers for study at the satellite centres. This is consistent with the argument that as HEIs are constantly pursuing more innovative ways to improve the quality of educational provision in order to remain globally competitive (Garwe, 2015), online education seems to provide an alternative avenue to accessing education with ease. Coupled with the opening of satellite centres is the migration from manual based to computer-based management of ODeL. There has been increasing migration from the time the institutions started offering courses using the learning mode. HEIs were operating everything manually including providing hard copies of modules from which students could study. With time, the institutions have managed to migrate to the use of Moodle as the official LMS, uploading modules online and processing of fees payments online using the interface of Moodle and the student portal.

Harmonisation of the calendar with conventional face-to-face students, introduction of supplementary exams and provision of administrative support especially in ICT were also identified as successes in the utilisation of ODeL delivery mode. These were considered successes since experience has shown that students registered for face-to-face were finishing their studies based on the annual calendar unlike those enrolled in ODeL where there was lack of adherence to the academic calendar. This was mainly due to delayed release of semester results leading to extended holidays hence delays in starting a new semester, consequently affecting the whole school calendar. Therefore, these have satisfied the need to ensure that programmes on offer through ODeL are inclusive and easily accessible to all students just like those offered through conventional mode regardless of the type of the institution where the programmes are being offered, the geographical setting of the institution. These have also ensured that ODeL programmes are offered to students despite integration of information and communication technology (ICT) and other educational innovations. This is in line with the purpose of the requirement in the Malawi Constitution, under Chapter IV, Section 25 (3.b),

which provides for rights to education and specifies that standards maintained by institutions are not inferior to the expected official standards.

5.1.3.31   5.1.3.2 Challenges

The findings also reveal what were perceived as challenges in the utilisation of the ODeL delivery mode. These include, high tuition fees and overhead costs of studying, high dropout rate, lack of access to student loans, recurring false fees balances, effects of COVID 19, examination missing grades and results anomalies, lack of reliable electronic libraries and other study resources and unstable academic calendar.

Despite the expanding growth of ODeL in terms of programs and enrolment and its benefits, students who enrol with ODeL have been shown to face individual, institutional and instructional challenges (Bhalalusesa, 1998, 1999; Cosmas & Mbwette, 2009; Mbukusa, 2009; Mushi, 2001). The findings of this study also revealed that students who are studying in Malawian public institutions have what are perceived as challenges in the utilisation of the ODeL delivery mode. The challenges found in this study include: financial constraints due to high study costs; effects of COVID 19 leading to purely online facilitation affecting levels of interaction; lack of reliable electronic libraries and other study resources; lack of access to student loans and an unstable academic calendar. The findings justify that there are many reasons that can be advanced for provision of student support. The supporting process could assist students in meaningfully engage with the system to resultant in advanced learning achievements.

5.1.3.32   5.1.3.3 Opportunities and Lessons Learnt

The results indicate that there are opportunities that can be taken advantage of and lessons that have been learnt in the utilisation of the ODeL delivery mode. The opportunities and lessons

learnt include the ODeL learning mode providing a learning platform for those who could have otherwise not have had a chance to enrol in higher education; the emergence of COVID 19 as an opportunity has led to recognition and use of the learning mode as an alternative to face-to-face learning leading to change of attitude towards it; the learning mode can raise funds for running its centres; universities can form partnerships to open more centres to offer teaching and learning using the mode; the ODeL teaching and learning mode can be used to offer short courses and is being underutilised by the institutions.

In spite of the challenges that the ODeL utilisation presents and need to be rectified in the institutions, the results indicate that there are opportunities that can be taken advantage of and lessons that have been learnt from the institutions in the utilisation of the ODeL delivery mode. The opportunities and lessons learnt include the ODeL learning mode increasing access to higher education by providing a learning platform for those who could otherwise not have had a chance to enroll. The National Council for Higher Education's (NCHE) harmonised selection report of 2018 observed that less than 30% of those who qualified to be enrolled in universities had access to higher education. And re-echoing the observation the NESIP 2020-30 report indicate that in Malawi, the student access rate to higher education is less than 1% due to factors related to access and equity, quality and relevance, governance and management. Although there has been an increase in the number of both public and private universities as a way of addressing access and equity challenges, selection into the public and some private institutions is highly competitive. Coupled with this is the high cost of higher education that limits access for the needy and vulnerable students and geographical constraints that put those living in urban areas at an advantage in accessing higher education over those in rural areas. Therefore, the introduction and utilisation of ODeL delivery mode has led to improved access especially for

those who have not found space to be accommodated in the conventional face-to-face courses regardless of the students' social economic status and geographical location.

While the coming in of COVID 19 pandemic has been considered a disaster, in the ODeL utilisation circles, this has been considered as both a calamity and an opportunity too since what can be considered as a vulnerability in one sense is also a strength in another. The pandemic has led to recognition of the great potential that ODeL has as a vehicle for education during calamities. Utilisation of the mode during this period has significantly contributed to the realization of equitable access and improving outcomes while enhancing quality of education especially when provision of education through traditional face-to-face delivery mode had become difficult. This has eventually led to change of attitude towards the ODeL delivery mode. Consequently, some institutions have opted to offer more programs and enrol more students under the learning mode while some have decided to continue using it after the COVID interruption.

Another lesson that has been learnt in utilisation of the mode is that the institutions are underutilising the ODeL teaching and learning mode. The existence of satellite centres which are closer to the prospective students and use of the Moodle LMS can be taken advantage of to attract more prospective students not only those enrolling in the long courses that are being offered currently but also short courses. The short courses can be targeting mostly personnel in institutions or business people that operate within a short radius from the satellite centres. In this regard the use of facilities in the satellite centres could be maximised. These short courses can be used to generate funds to run operations of the centres leading to autonomy. In addition, with the existence of satellite centres universities can take advantage of the presence of another HEI satellite centre to form partnerships and utilise the already existing centres to offer more courses based on demand. These partnerships could also lead to the opening of more centres for

example in the districts based on existing demand unlike the way it is now that other institutional satellite centres cater for regions to offer teaching and learning using the mode. While this idea of opening satellite centres might prove expensive for each institution, opening of the district centres as a partnership may prove to be cost saving. This could lead to offering education to students within their vicinity giving the students more sense of minimised physical distance and less cost unlike the current experience where students have to find accommodation within a radius from the regional satellite centre and suffer upkeep cost since they come from other districts in a rural setting which entails high cost of studying. This experience defeats some of the characteristics of online learning which is basically low cost, electronically aided learning irrespective of space and time when one needs to study. The satellite centres can also be used for administering end of semester examinations to reduce on occasional trips and travel expenses that the students have to make to the main centres to sit for examinations and ensure more utilisation of the satellite centres.

5.1.4 Interventions for improved ODeL student experiences

The fourth objective of the study established interventions for improved ODeL student experiences in higher education institutions. The findings reveal that there are interventions that the respondents perceived as potential areas where ODeL students' experiences could be improved. These interventions include making improvements to the learning environment; improvements in use of library and other facilities including extension of opening hours; more lecturer student interaction synchronously or asynchronously using the official learning platform Moodle; reintroduction of monthly meetings; timely two way communication; provision of improved technological resources, and consideration to have students pay fees in instalments and institutions lobbying for access to student loans.

The findings reveal that there are interventions that the respondents perceived as potential areas where ODeL students' experiences could be improved. These interventions include making improvements to the learning environment which includes building own facilities at an environment conducive for learning in case of those institutions that are operating in rented premises. Purposely built infrastructure could lead to improvements in access and use of library or resource centres and other facilities including extension of opening hours. The findings also reveal a need for more lecturer student interaction synchronously using the official learning platform Moodle including more face-to-face interaction with lecturers or tutors among students hence advocating for a more blended mode. In supporting use of synchronous learning Camilleri (2021a) indicates that synchronous technologies allow lecturers/tutors to control and monitor their students' engagement, and to keep a track record of their interactions during virtual sessions. As a result, that can be in a better position to implement student-centred strategies and tactics, to improve learning outcomes. On the other hand, asynchronous learning allows learning at own schedule denoting a sense of more independence which entails that the level of engagement is low as compared to synchronous learning. The preference of synchronous learning is consistent with research findings on independent online learning that indicate a gap between the assumptions of the developers and providers of the learning initiative, software or training and students' opinions (Gros, 2001). Hence the findings reveal that students need for more lecturer or tutor/student interaction synchronously blended with face-to-face interaction, consequently proposing that ODeL should have its own lecturers. While this intervention can be expensive in terms of recruitment and operationalization, it implies that the findings show that there is lack of proper understanding that in ODeL the role of the lecturer/tutor is facilitatory and the student has to study individualistically. In addition, another area that the study established is reintroduction of monthly meetings where the students feel they are provided a

platform to present their concerns and seek clarification on issues that affect them in their studies as a group.

The other area of intervention for better student experiences that the study found was that the institutions should have updated student data and records of students enrolled in their courses. Experience has shown that once students are enrolled, the records are updated once when students are about to sit for end of semester examinations for the purposes of identifying those with fees balances not necessarily to know how many students utilising ODeL mode that the institutions have. Related to this finding is the need for an intervention on timely two-way communication. The students feel that there could be a better time and other better ways of communicating about fees balances using their students' portal. This could have been possible if there was an effective center and mother institution (main hub) network to offer practical and timely assistance when needed. This also includes timely communication on class scheduling that could allow preparation in terms of accessing and buying data bundles since some students reside in the rural areas. In case of students that operate in close radius to the centers there should be provision of improved technological resources and equipment, increased internet bandwidth and provision of alternative sources of power. Additionally, timely communication on assignment and examination grades would allow for rectifying anomalies and allow for timely psychological, physical and financial preparation for either a supplementary exam or a repeat course hence minimizing drop out cases.

The study findings also reveal that ODeL students could have found it more convenient if the institutions could have considered students to pay fees in instalments and lobby for access to student loans on their behalf. This intervention could have assisted in averting the high cost of higher education that limits access for the needy and vulnerable students. This could have been

possible if the institutions could have been religiously following stable academic calendars since student loans are provided based on strict timelines, that is, four years of study.

5.1.5 Summary

In summary, the findings of this study have shown that students have varied perceptions under different indicators of the study. In the findings under institutional characteristics and context, students' perceptions were high on institutional facilitating conditions while they had low perceptions on learner centeredness and cost and affordability. There were also inconsistences evidenced by variances in the responses such that the results showed more variances in the responses on indicators learner centeredness, and cost and affordability with a considerable number of respondents who opted for neutral response on these two indicators. In the findings under quality and relevance of student support, the findings indicate that students have a low perception on institutional support with a large proportion of respondents giving a neutral response. There were high perceptions on quality and relevance of student orientation; use of technology; and connectedness to other students. While high perceptions under interaction and communication with tutors and the system there were inconsistencies evidenced by variances in the responses. It is also important to note that the proportion of respondents who expressed neutral perceptions towards academic and non-academic support was rather of concern. This finding was unexpected and indicates notable diversity among students, which could lead to differences in the way they may perceive certain kinds of support which the HEIs offer. While there were a number of successes that the students identified in the utilization of ODeL delivery mode, there were also some challenges that students face, opportunities and lessons that can be learnt that the findings established. Some of the challenges that were identified had solutions proposed under interventions for improved student experiences.

There could be a probable explanation on neutral responses which in some cases almost a quarter of the respondents selected in the current study, for example, the perceptions on academic and non-academic support. The possible explanation could be that the neutral response conveniently provides an avenue for some respondents to avoid expressing their extreme opinions about how they perceive certain types of characteristics: In some cases, it could be lack of enough knowledge on the aspect under discussion or failure to express true opinion about the aspect.

> "…People who check that [neutral] off will include those who think the question is not relevant to them, people who don't feel they have enough information to make an informed choice, and people who can think of reasons to be positive and reasons to be negative, but can't make up their mind… when respondents are asked questions about their own lives, feelings, or experiences and a 'don't know' option is offered, it allows the respondent to avoid the work required to give the answer… sometimes there are things asked that the respondent legitimately lacks the knowledge about… a neutral category provides an easy way out for respondents who are less inclined to express their opinion, but potentially means a substantial proportion who favor or oppose a topic aren't counted… most respondents tend to avoid voicing extreme opinions… many are averse to taking a stand on controversial topics. The combined effect of these tendencies, is when presented with a 'safe' choice at the center of the scale, respondents are likely to select that, rather than reveal their 'true' opinion" (TalentMap, 2022).

Worth explaining also are the variabilities or dispersion of values in the dataset which is evident by the value of the coefficient variation.

> "…The coefficient of variation (CV) is a relative measure of variability that indicates the size of a standard deviation in relation to its mean. It is a standardized, unitless

measure that allows you to compare variability between disparate groups and characteristics. It is also known as the relative standard deviation (RSD). Analysts often report the coefficient of variation as a percentage.

When a distribution has lower variability, the values in a dataset are more consistent. However, when the variability is higher, the data points are more dissimilar and extreme values become more likely. Consequently, understanding variability helps you grasp the likelihood of unusual events.

Distributions with greater variability produce observations with unusually large and small values more frequently than distributions with less variability…" (Forst, 2022).

The variances in the results in the way students perceive utilization of ODeL teaching and learning mode in the HEIs attest to the lack of harmonization in the way HEIs offer ODeL in their respective institution. Even though the HEIs under study are offering ODeL mode in a dual system and as a blended mode, it can be anticipated that students' experiences are different hence perceptions of the systems in the respective institutions are different. This is attested to by Camilleri & Camilleri's (2021) whose study revealed that students' perceived interactivity as well as their higher education institutions' facilitating conditions were having an effect on their perceptions about the usefulness of remote learning, on their attitudes as well as on their intentions to use them. This is also corroborated by Gros, 2001 who indicated that with independent online learning, research findings indicate a gap between the assumptions of the developers and providers of the learning initiative, software or training and students' opinions.

CHAPTER 6: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.0 Overview

This chapter presents conclusions, implications, study's contribution to knowledge, recommendations and finally suggestions for future research. The general objective of the study was to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public higher education institutions. Accordingly, four specific objectives were investigated, and a number of variables under each objective were tested in order to achieve the main objective.

6.1 Conclusions

The findings of this study indicate that there are institutional level characteristics and context that are required to facilitate ODeL student learning in the HEIs on which students have varied perceptions. Therefore, an HEI that demonstrate as having these characteristics can be considered as facilitative to learning hence positively influencing students' perceptions. Another finding was that the quality and relevance of student support services assessed, impacted on ODeL students' experiences in the HEIs consequently having an influence on their learning outcomes. Additionally, the results of the study have shown that despite the challenges identified, ODeL as a learning mode has successes, opportunities, lessons that have been learnt from its utilisation and interventions that the study has identified that can be advantageous for improved students' experiences. Hence these successes, opportunities and lessons learnt far outweigh the challenges influencing the students' perceptions.

Several conclusions can be drawn from the present study. Firstly, the results of this study have indicated that institutional facilitating conditions, learner centeredness, provision of good

quality learning as indicators are regarded highly among students. The implication is that student needs and expectations on institutional characteristics and context are either met or exceeded on these aspects while their needs and expectations on provision of good quality learning are not met for this aspect hence was perceived lowly. The present study has demonstrated that institutional characteristics and context is considered a facilitative tool to learning in the HEIs and that it can influence ODeL students' perceptions. Therefore, management and staff of the HEIs offering ODeL in Malawi, ought to embark on identification of the aspects of institutional characteristics and context that need further improvement or development and mobilise resources for such improvements to appropriately meet students' needs and expectations in ODeL because they are important in facilitating learning.

Secondly, the findings indicated that students' perceptions of the quality and relevance of student support services were high in terms of quality and relevance of student orientation, use of technology, connectedness to other students, interaction and communication with tutors and the system. This indicates that students recognise the commitment that the HEIs have shown towards quality and relevance of student support services which ultimately influences their satisfaction levels with their study experience. Perceptions on academic and non-academic support were neutral and low on institutional support. Academic or tutorial support deals with supporting students in their cognitive, intellectual and knowledge issues of specific courses or sets of courses including developing general learning skills while non-academic or counselling support entails the support of students in the emotional and administrative aspects of their studies. This shows that students view the academic and non-academic support on offer in the institutions as meeting their basic expectations.

The interpretation of the findings is that student support services are one of the best practices and an essential part of online learning due to the feeling of isolation that students' have since

they study individually, at a distance, using technology and at their own pace. Student support systems as a constituent unit of an ODeL system exist based on the view that it influences student experiences as it can affect student satisfaction, retention and learning. This is synonymous with the social constructivism theory which emphasizes the importance of having students who are actively involved in their learning process. Hence, the need for quality and relevant student support services cannot be reemphasized. Therefore, public HEIs offering courses through ODeL need to concentrate on offering timely and efficient student support considering its significance in influencing students' decisions to get enrolled, keep on studying and achieve positive learning outcomes which in this study is affected by the bureaucracy that exist within dual mode institutions.

The public HEIs in this study are operating as sub-systems in institutions where there are both face-to-face conventional students and ODeL students while they were designed to offer residential face-to face courses. In that regard, decision making and student support is offered based on the practices derived from the face-to-face experience other than on needs of the online teaching and learning mode. A good example, was the proposed use of the wallet arrangement which could have been allowing students to go up to a maximum of eight years of study for a four-year degree program as a way of allowing flexibility in assisting ODeL students to have a lighter load by breaking semester work into two. The proposal was rejected and abandoned by the institutions that had already started implementing it on the reasoning that it would present academic disorganisation and lead to devaluing standards of higher education without considering the circumstances under which online students learn. Therefore, this indicates that there is need for a paradigm shift that requires specificity when dealing with issues affecting students in ODeL and those affecting face-to-face students in a dual mode. Additionally, staff in ODeL operating on delegated positions have to wait for decisions to be made at the mother institution consequently rendering ODeL systems' lack of autonomy and affecting timely

information flow. The low perception on academic and non-academic support can also be attributed to work overload and lack of segregation of duties in ODeL due to the understaffing which is common in all the centres. It was established that centre managers perform all the roles offering operational, financial, administrative and technological support to the ODeL students.

Thirdly, there is evidence from the findings that ODeL delivery mode offers a platform for teaching and learning to students who could have otherwise not have been enrolled in higher education due to limited spaces and high competition. Use of the mode has led to high intake in the institutions and more programs being offered using the learning mode based on demand. Further, the findings show that ODeL has a potential for growth and it is being underutilised as evidenced by the successes, opportunities and lessons that have been learnt thus far in its implementation. One of the notable successes was the establishment of satellite centres across the country by the HEIs that has led to provision of education closer to the students' localities. This has offered an opportunity to both the institutions and students to enrol more students and to have access to higher education closer to home respectively. However, the results have also shown that students face a number of challenges during their period of study that can be categorised as individual, institutional and instructional challenges. Individual challenges include financial constraints to pay tuition fees and manage other related study costs which is a major challenge. The study found that the institutional related challenges that ODeL students face in the course of their studies include lack of access to student loans, recurring false fees balances, and an unstable academic calendar being the major one in this category. Instructional related challenges include effects of COVID 19 leading to purely online facilitation; assignment and exam missing grades and results anomalies; lack of reliable electronic libraries and other study resources. These individual, institutional and instructional challenges are interrelated as they affect students psychologically hence have an effect on performance, progress and retention consequently leading to drop outs.

Finally, the results of the study have revealed that there are interventions that, if utilised, could lead to improved students' experiences in ODeL. Some of these interventions are solutions to some of the challenges that the study has identified that students face in the utilisation of ODeL as a learning mode. Among the interventions are: making improvements to the learning environment; more lecturer or tutor-student interaction, re-introduction of monthly meetings and individual consultations through the establishment of student helplines. Almost all these suggested interventions point toward reducing barriers and increasing interaction and communication which is one of the most important catalyst in facilitating learning using the ODeL mode. In the utilisation of ODeL delivery mode student support is influenced by the level of interaction and communication. Social relations and interactions are especially important for the experience of learning satisfaction in online learning environments (Richardson *et al*., 2017). The efficacy of interactive communications is based, among other things, on the immediacy of feedback and personal focus hence the suggested interventions focus on group and individual communication that could facilitate timely and efficient feedback. These suggested interventions could be a good starting point for the institutions in offering solutions to institutional, individual and instructional challenges that the students experience in the short term as they are looking at long term solutions to the existing challenges.

6.2 Implications of the Study

In the study, the beneficiary students voice was given a priority status in investigating students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public higher education institutions. In this regard, the significance of the study lies in its contribution towards the understanding of students' perceptions in the utilisation of ODeL based on their experiences. This approach of "Nothing About Us Without Us' in the study can influence practices at institutional, country and Ministry levels for enhanced equitable access

and improved quality of education influencing positive learning outcomes in ODeL utilisation. Therefore, the significance of the study findings lies in its theoretical, managerial and policy implications from the students' perspective.

6.2.1 Theoretical Implications

The study was largely informed by the systems theory in order to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public higher education institutions (HEIs). HEIs which are school systems are among the oldest existing organisations with all their institutional components that make them function as a whole. In the case of HEIs operating as dual mode systems (online and face-to-face), the two systems make the institution function as a whole to achieve a common purpose, that is, offering higher education. Thus, the systems are interrelated, interdependent and interacting forming a collective entity as advanced by Von Bertalanffy (1968). This interrelatedness, interdependence and interaction in the systems renders the ODeL system operate as system within another system. This arrangement renders ODeL systems having difficulties and less autonomy in making own ODeL specific operational decisions due to delegated positions that staff within the system hold and based on the complexities that it has, like reliance on electronic devices for interpersonal communication. These complexities require learning using the ODeL mode to be more learner centred which the system find difficult to adapt to, due to lack of its own staff and inadequate staffing levels since such staffing decisions have to be made at institutional level. These operational complexities in ODeL also require quality and relevant institutional level support. Since the two systems (ODeL and face-to-face) are operating based on the premise that initially the public institutions were established to offer education using face-to-face learning mode, where the levels of student support are minimal

and ODeL came in as an afterthought, the quality and relevance of student support in ODeL is affected.

Hence the study informs the view the systems theory advances that the education system has a high-priority function in the production of human resources, and that the production function is a relationship between the amount of input and intervening factors to produce a certain good, with consideration to its quality. Therefore, the amount and quality of inputs that are put into ODeL as a system should be considered in order to achieve the quality desired irrespective of whether it is interrelated and interdependent to another system. In the systems theory, inputs encompass the material, human, financial, or information resources required to produce goods and services and the transformation process involves the application of production technology by management to change the inputs into outputs just the way it is done in an ODeL system. Therefore, institutional management have to consider inputs that are being made in ODeL so that it can produce quality outputs.

All organizations are open systems which are unpredictable since they interact with their environment to survive hence, they observe the operating environment, generate information and make changes based on these observations consequently influencing contextual and characteristic variations. ODeL systems which are generally characterised by distance and technology based on the nature of the studying mode were established to cater for the changes in growing demand for higher education. While HEIs were not established to cater for students studying using this mode, this change led to the HEIs adapting by either having purposely built structures or renting premises to cater for such a need. Those that have purposely built structures show a sense of preparedness while those that are renting have been facing challenges in making changes to the rented premises to suit their needs.

This informs the view that while adaptation to changes can be recommended when the operating environment changes, these changes can have negative effects on the context and characteristics under which the system is operating just like the way ODeL mode is operating in some of the institutions. And while there are successes, challenges, opportunities, and lessons that can be used to inform interventions for improved student experiences in these ODeL systems, unless these negative effects on adaptation are dealt with, the successes, opportunities and lessons learnt cannot be taken advantage of to improve student expectations.

While environmental disorders do not necessarily disrupt the functioning of systems, education systems must constantly adapt and evolve to ensure survival in response to ever changing system dynamics. But recently, it has been observed that despite HEIs and ODeL systems operating systematically in their procedures and are systemic in their approach with emphasis on structured, planned, institution-based instruction, environmental disorders specifically the COVID 19 pandemic has affected how the systems operate. Additionally, ODeL which is supported by technology, open educational resources and distance education with a logical and gradual sequence of operations or activities, has experienced changes leading to operational complexities displaying functional differentiation affecting students' perceptions in the process.

Hence, there are some operational adjustments that have been made in the HEI system that have influenced perceptions of students as users of the ODeL delivery mode which is operating as a system within another system thus operating as a hybrid-blended or dual mode. For example, during the emergence of COVID 19, those students who were enrolled in ODeL completely switched to virtual delivery than was the case before where they could combine virtual delivery and face-to-face. This affected the level of interaction and communication between the facilitators and ODeL students consequently reducing the level of academic student support. Meanwhile those who were enrolled for face-to-face had to switch to online which led to

delivery disorders within the HEIs. Thus, the study informs the view that while a system can operate within another system there ought to be clear guidelines on how the systems would function in relation to each other so that their operations do not affect each other in the process affecting their end user utility and outcomes. It also informs the level of preparation that the institutions could have in terms of their preparedness as a way of easily adapting to the new operating environment in circumstances where there are changes in the environment in order to ensure system operational survival with minimal effects on users.

In the same vein ODeL is considered a system responding to high demand for higher education in the country and a response to higher education operating environment changes leading to ODeL system being established within an existing conventional system. ODeL as a complementary and alternative delivery mode to the conventional face-to-face has led to technological developments that are considered an unusual form of learning since it breaks up the process of interaction and communication as it relies on electronic devices for interpersonal communication which influences changes in teaching and learning behaviours. These technological developments like use of the Moodle LMS on computers and smartphones have brought in a sense of isolation considering the separation of students in time and space from fellow students, content and the system in the HEIs.

The significance of the findings of the study lies on informing self-motivation, discovery and collaborative learning theories as it focuses more on interaction abilities among the students, with course instructors and their technological virtual environment. Hence the study informs best practice as far as student support is concerned. Therefore, the study informs the view that online learning environments ought to be designed to support and challenge the students' reflective and critical skills, by including interactive learning and collaborative approaches despite the environmental disruptions that exist or may arise.

6.2.2 Managerial Implications

The findings of this study propose some ideas for managerial practice. The study's significance lies on informing legislation that govern establishment and administration of ODeL delivery mode including a well-defined criterion of establishing and managing ODeL programs in the HEIs from the students' perspective in order to offer similar experiences. It is therefore crucial for HEIs in Malawi to pay more attention and devout time and resources to ensuring that institutional settings (buildings and their location) are conducive for teaching and learning and that both physical and technological facilities (computers, internet, electricity) are available and highly maintained in order to give the students improved experiences ultimately making them more contented. In that respect the study findings also indicate a need for harmonisation of institutional calendars between ODeL and face-to-face students.

The study findings have implications on how to enhance the lessons learnt over time as far as ODeL utilisation in higher education institutions is concerned. It encourages sharing of experiences among institutions that are offering ODeL and encourages creation of synergies. This includes encouraging institutions to utilise the already existing satellite centres to work together in offering courses in these centres and opening of more centres in a harmonised manner at district level to increase intake and provide higher education through ODeL in a harmonised manner and closer to the students. As it stands currently institutions have centres at regional level and mostly in cities and urban centres. Since the study also covered utilisation of ODeL delivery during the COVID 19 period, the study findings point at the lessons the HEIs learnt pre, during and post the COVID period to inform how universities can prepare for such eventualities in future.

The findings also highlight the mandate that the National Council for Higher Education (NCHE) which was established by NCHE Act (2010) has to fulfil in ensuring that higher education in

Malawi is regulated. In satisfying its vision of supporting systematic growth and excellence in HEIs and mission to promote quality, accessible, relevant and inclusive higher education and training in Malawi, one of its roles is the accreditation of HEIs and programs according to set national standards. In 2022 NCHE accredited 8 public and 21 private HEIs according to the Education Sector Performance Report 2021/2022. In Malawi, NCHE as the main regulatory body of HEIs, has come in while operations of the public HEIs under study had already started taking place. By the time NCHE started its work, the public HEIs had already existing programs which they were offering and already housed within their faculties and departments that were replicated in ODeL. The HEIs considered the existing high demand for the programs and also considered themselves ready to offer such courses through ODeL as long as they were having enough qualified staff in the faculties to offer such programs. Therefore, it is just recently when NHCE was instituted that the institutions have been made aware of the guidelines and asked to fulfil the checklist of institutional requirements that are supposed to be fulfilled. Among the requirements are: developing policies to guide successful implementation of open and distance learning, provision of adequate infrastructure to accommodate students and technological equipment for use when studying, adequate and qualified staff meeting human resource requirements and having adequate financial resources to run operations of the programs. This is more reason why the public HEIs offering ODeL in Malawi should maintain and improve on institutional characteristics and context as a means of providing a conducive environment for facilitating student learning utilising ODeL mode.

6.2.3 Policy Implications

The Government of Malawi is in the process of developing an ODeL policy. It is also envisaged that the findings of the study will contribute towards the development of Malawi ODeL policy which is aimed at creating an enabling environment for both public and private HEIs to be

systematic and realistic in providing education and training through the ODeL delivery mode. Currently, with the absence of the policy, the significance of the study lies on offering insights on how public higher education institutions offer their ODeL programmes so that it is done in line with prevailing country ODeL guidelines and institutional situations. The information is likely to help decision makers come up with interventions at country, education system and institutional specific levels to address challenges affecting and take advantage of opportunities existing in the ODeL delivery mode in higher education institutions.

Students feedback on the experiences using ODeL delivery mode provides useful insights on what the institutions, Ministry and country can improve on as regards to student support, increased access, use of digital and educational technology in public higher education institutions hence minimising ad hoc provision of education and training programmes through ODeL consequently influencing quality controls at tertiary level. Furthermore, when it comes to use of digital and educational technology in the HEIs, the level of students' previous experience and skills for use of educational technology impact students' level of engagement for improved interaction and dialogue in digital learning. This information leads to the realization of the need for the education system in Malawi to introduce technologically enhanced learning at primary and secondary levels for easy student transition and adaptation at tertiary level.

6.3 Study's Contribution to Knowledge

The findings from this study make several contributions to the existing literature. An important practical contribution from this study is that ODeL still remains a new and strange phenomenon different from the traditional way of learning to both the students and the general public in Malawi. Thus, the study will further contribute to giving a clear understanding of what students and the general public should expect when students have enrolled to study using the study mode.

The study was conducted giving a priority status to the voice of the beneficiary students who are the end users to investigate their perceptions on utilisation ODeL delivery mode in the HEIs. In so doing, the study provides insights into what the program developers and providers should take into consideration when developing and offering such programs from the end user (student) perspective. While there are other similar studies conducted on ODeL focusing on different or similar indicators, other levels of study and in other countries, this study has focused specifically on public higher education institution level in the context of Malawi. In this regard, the study contributes towards the understanding of students' perceptions of utilisation of ODeL as a delivery mode in HEIs in Malawi and other Southern Africa Development Community (SADC) countries that operate similar ODeL systems under similar prevailing conditions and how the utilisation has enhanced equitable access and quality of education in these countries.

Additionally, the conceptual framework of the study Figure 1.1 on page 9 identified three interrelated independent variables, that are features of ODeL delivery mode that can influence students' perceptions of utilization of ODeL. Under each of these variables, that is, institutional characteristics, quality and relevance, and student support systems, a central phenomenon has been availability, use of and early exposure to technology hence intrinsic to the study. In this case, the study contributes to the understanding of the current technological status quo in Malawi in general as a country and the Malawian education system in particular especially in the HEIs. Therefore, the study establishes the critical role, availability, use and exposure to technology plays in influencing students' perceptions.

6.4 Recommendations of the Study

In view of the study findings, the following are recommendations for practice and future research in the utilisation of ODeL delivery mode in the Malawian public HEIs:

6.4.1 For Practice

Higher education institutions offering ODeL need to seek ways of making their institutions and centres conducive for learning using the delivery mode in terms of provision of facilities, equipment, technology and student support in line with the nature of the learning mode. Generally, the institutions need to come up with strategies to make improvements on learner centeredness, institutional as well as academic and non-academic support. This would include enhanced facilitator-student interaction and establishment of students' helplines in the institutions in order to offer timely support to students and promote interaction. Related to this is increasing the staffing levels so that there is reduction of workload on the centre managers, there is segregation of duties and roles and responsibilities become clearer.

The study recommends that the institutions should be systematic in the way they offer ODeL courses by adhering to academic calendar and avoid unnecessary disruptions including making decisions that are ODeL specific irrespective of the institution operating as a dual mode system. The study recommends that the institutions should continue offering orientation sessions as soon as students join for first year which should include giving a clear definition of what ODeL as a learning mode of study is, giving emphasis on the facilitatory role that lecturers or tutors play and what is expected of the students. The study also recommends that the institutions should offer similar services to all students regardless of whether they are at a satellite centre or main hub to minimise student travel to and from the main hub to help students reduce on study costs and have the same experiences.

6.4.2   For Future Research

The current study only focused on public higher education institutions offering education using the ODeL delivery mode. There is need to conduct a similar study on private institutions that are offering higher education using ODeL so as to compare findings on students' perceptions.

While the current study's focus was on public higher education institutions, it happens that these public HEIs offer ODeL in a dual mode system. Hence, there is need to conduct similar studies in HEIs that operate as a purely single system to establish how the operating systems compare to each other in terms of students' experiences. Finally, the current study focused on students as end users hence there is need to conduct further studies that would focus on management of the ODeL institutions or systems as service providers so as to get their perspective on the services that they provide to the students so that there is a comparison analysis. From the methodological perspective, there is also a need to carry out a study beyond examining perceptions only in a descriptive manner by testing relationships among different study variables of interest in order to establish the significance of the ODeL study mode elements that affect it. Additionally, in view of the critical role technology plays in ODeL, there is need to explore how the Malawian education system starting from the Education Ministry and HEIs have taken advantage of existence of education technology and enhanced its availability and use at basic, secondary, tertiary levels and specifically in the HEIs.

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APPENDICES

APPENDIX I: RESEARCH ETHICS AND REGULATORY APPROVAL AND PERMIT

MZUZU UNIVERSITY

DIRECTORATE OF RESEARCH

Mzuzu University
Private Bag 201
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MZUZU UNIVERSITY RESEARCH ETHICS COMMITTEE (MZUNIREC)

Ref No: MZUNIREC/DOR/22/13   20/03/2022

Ms. Florence Sepula,

Mzuzu   University,

P/Bag 201,

Mzuzu.

Email:

florencesepula@gmail.com

Dear Ms. Florence Sepula,

RESEARCH ETHICS AND REGULATORY APPROVAL AND PERMIT| FOR PROTOCOL REF NO. MZUNIREC/DOR/22/13: STUDENTS' PERCEPTIONS OF UTILISATION OF OPEN DISTANCE AND eLEARNING (ODeL) DELIVERY MODE: A STUDY OF SELECTED MALAWIAN PUBLIC AND PRIVATE HIGHER EDUCATION INSTITUTIONS (HEIs)

Having satisfied all the relevant ethical and regulatory requirements, I am pleased to inform you that the above referred research protocol has officially been approved. You are now permitted to proceed with its implementation. Should there be any amendments to the approved protocol in the course of implementing it, you shall be required to seek approval of such amendments before implementation of the same.

This approval is valid for one year from the date of issuance of this approval. If the study goes beyond one year, an annual approval for continuation shall be required to be sought from the Mzuzu University Research Ethics Committee (MZUNIREC) in a format that is available at the Secretariat. Once the study is finalised, you are required to furnish the Committee with a final report of the study. The Committee reserves the right to carry out compliance inspection of this approved protocol at any time as may be deemed by it. As such, you are expected to properly

Committee Address:
Secretariat, Mzuzu University Research Ethics Committee, P/Bag 201, Luwinga, Mzuzu 2; E-mail address: mzunirec@mzuni.ac.mw

173

maintain all study documents including consent forms.

Wishing you a successful implementation of your study.

Yours Sincerely,

Gift Mbwele

MZUZU UNIVERSITY RESEARCH ETHICS ADMINISTRATOR
For: CHAIRMAN OF MZUNIREC

APPENDIX II: LETTER OF INTRODUCTION FROM DEPARTMENT

MZUZU UNIVERSITY

Department of Teaching, Learning and Curriculum Studies

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29th March 2022

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER OF INTRODUCTION: MRS FLORENCE SEPULA

Mrs Florence Sepula is a registered Master of Education (Leadership and Management) Program student at Mzuzu University. She has been cleared by the Mzuzu University Research Ethics Committee (MZUNIREC) to collect data for the research study she is conducting as a requirement for the program.

Kindly assist her accordingly.

Yours faithfully,

Dr Margaret M. Mdolo
Program Coordinator

APPENDIX III: LETTER SEEKING PERMISSION FROM UNIVERSITIES

The Registrar

…………………………….

…………………………….

…………………………….

…………………………….

…………………………….

Dear Sir/Madam

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

I am a student, currently pursuing a Master of Education degree in Leadership and Management at Mzuzu University, under the supervision of Dr Paxton Zozie. I am undertaking a research study entitled: ***"Students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode: A study of selected Malawian public and private higher education institutions (HEIs)"*** in partial fulfilment of the study programme.

Specifically, the study aims at establishing the effects of characteristics and context of ODeL utilization on student learning at institutional levels, assess quality and relevance of ODeL student support systems in higher learning institutions, identify challenges, opportunities and lessons learnt in student ODeL mode utilization in higher learning institutions and establish interventions for improved ODeL student experiences in higher learning institutions.

I would like, therefore, to ask for permission to carry out research in your esteemed establishment which is one of the higher education institutions that offers courses using the ODeL delivery mode. Specifically, I would like to administer online surveys to your students and also have interviews with the ODeL Centre Managers, on students' utilization of the ODeL delivery mode and how that affect their perception about the mode.

Please take note that there will be no negative consequences for non-participation. If consent is given, I will respect all respondents' right to privacy, safety from harm and confidentiality. I will ensure that all documentation and transcripts are anonymous, with pseudonyms or codes

being used. Confidentiality will be maintained in both the survey responses and the recorded interviews. Any detail that might identify a respondent/participant or their institutions will be omitted in any published and written data. The Mzuzu University Research Ethics Committee has cleared and approved this research project. Please refer to the attached letters.

The study has potential to contribute to scholarly work, in the understanding of students' perceptions on utilization of ODeL consequently aid in determining levels of student satisfaction in the utilization of the mode. All data collected will be kept securely, be used for academic purposes only and may be published in academic journal articles, books and conference proceedings. There are no foreseeable risks in participating and the institution or officers will not be paid for this study.

If you are willing to give permission for research to be conducted at your institution, kindly sign the form at the bottom of this letter and return it to me as soon as possible. I would appreciate accessing your institution from April to June, 2022. If you have any concerns or queries regarding this research, please do not hesitate to contact my supervisors or me.

Thanking you for your continued cooperation.

Yours faithfully,

Name of student: Florence G. Sepula (Registration Number: MEDLM3220

+265999877363

florencesepula@gmail.com

Research Supervisor: Dr Paxton Zozie

+265999077786

pzozie@gmail.com

APPENDIX IV: LETTER OF SELF INTRODUCTION

Dear Sir/Madam,

RE: INTRODUCTION

I am a student, currently pursuing a Master of Education degree in Leadership and Management at Mzuzu University, under the supervision of Dr Paxton Zozie. I am undertaking a research study entitled: ***"Students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode: A study of selected Malawian public and private higher education institutions (HEIs)"*** in partial fulfilment of the study programme. This study is expected to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public and private higher education institutions.

Specifically, the study aims at establishing the effects of characteristics and context of ODeL utilization on student learning at institutional levels, assess quality and relevance of ODeL student support systems in higher learning institutions, identify challenges, opportunities and lessons learnt in student ODeL mode utilization in higher learning institutions and establish interventions for improved ODeL student experiences in higher learning institutions.

You have therefore been identified as one of the valued respondents to provide information for the study. Please be so kind and help in completing the online survey attached by answering the questions below. It will take you approximately 20 minutes to complete. The information you provide will solely be used for academic purposes of this study and treated in the strictest confidence. You will notice that you are not asked to include your name or address anywhere on the questionnaire.

Thank you for your co-operation.

Yours sincerely

FLORENCE G. SEPULA

APPENDIX V: SURVEY QUESTIONNAIRE FOR STUDENTS

Please <u>tick</u> or <u>shade</u> the appropriate choice applicable to you

Ques #	Demographic/General Item	Code	Possible Answers	Tick/Shade
1.	**Gender**	[01]	Male	
		[02]	Female	
2.	**Level of Study**	[01]	Level 1	
		[02]	Level 2	
		[03]	Level 3	
		[04]	Level 4	
3.	**Student base**	[01]	Main campus center	
		[02]	Satellite center	
4.	**Type of institution**	[01]	Single mode	
		[02]	Dual mode	
		[03]	Emergency Remote Learning	
5.	**How long have you been using ODeL delivery mode?**	[01]	One year	
		[02]	Two years	
		[03]	Three years	
		[04]	More than three years	
6.	**Platform used**	[01]	Moodle	
		[02]	Google classrooms	
		[03]	Other *(please specify)* …………..	
7.	**Learning format**	[01]	Online with others at same time	
		[02]	Online alone at own time	
8.	**What medium have you used?**	[01]	Face to face tutorials	
		[02]	Audios	
		[03]	Videos	
		[04]	Other *(please specify)* …………..	
9.	**Type of technological devices used**	[01]	Cello phone	
		[02]	Computer	
		[03]	Radio	
		[04]	Printed material	
		[05]	Other *(please specify)* …………..	
10.	**Form of content delivery**	[01]	Text message	
		[02]	WhatsApp	
		[03]	Email	
		[04]	Other (please specify) …………..	

SECTION B: - INSTITUTIONAL CHARACTERISTICS AND CONTEXT

6. What is your perception of the following aspects of your institution of learning? (Please **tick** √ or **Circle** ○).

Key: 1 - Strongly Disagree (SD), 2 – Disagree (D), 3 – Neutral (N), 4 – Agree (A), 5 - Strongly Agree (SA)

Code	ITEM	SD	D	N	A	SA
	Institutional Facilitating Conditions					
B1	Institution has the required infrastructure to support your learning	1	2	3	4	5
B2	Institution has adequate equipment to support your learning	1	2	3	4	5
B3	Institution has adequate staffing levels to support your learning	1	2	3	4	5
B4	I can easily get access to the institution using different accessibility modes e.g. phone, email	1	2	3	4	5
B5	I can easily access administrative services such as registering and paying fees	1	2	3	4	5
B6	I get timely dissemination of important academic information	1	2	3	4	5
	Learner Centeredness					
B7	Institution promotes ownership of what I learn					
B8	Institution offers flexibility in studying at my own time and pace	1	2	3	4	5
B9	Institution offers me a range of study choices	1	2	3	4	5
B10	Institution offers me good quality of learning	1	2	3	4	5
B11	Institution offers me high level of openness	1	2	3	4	5
B12	The utilization of ODeL study mode gives me a sense of minimized physical distance	1	2	3	4	5
B13	The utilization of ODeL study mode gives me a sense of minimized psychological distance	1	2	3	4	5
	Cost and Affordability					
B14	I can use a range of devices to access content based on the platform being utilized by the institution	1	2	3	4	5
B15	I find the cost of buying a device for access to content reasonable	1	2	3	4	5
B16	I incur a reasonable cost to access content	1	2	3	4	5
B17	I am required to travel to the center frequently	1	2	3	4	5
B18	I find it convenient to travel to and from center	1	2	3	4	5
B19	The cost of travel to and from center is affordable for me	1	2	3	4	5
B20	I find the purpose of travel to center realistic	1	2	3	4	5
B21	Time spent at the center is reasonable for me	1	2	3	4	5
B22	I find it beneficial to spend time at the center	1	2	3	4	5

11. Please suggest any other characteristics or contextual aspects you would like the institution to pay more attention to

………………………………………………………………………

SECTION C: - QUALITY AND RELEVANCE OF STUDENT SUPPORT

12. What is your perception of the following aspects of the quality and relevance of student support in your institution? (Please **tick √** or **Circle ○**).

Key: 1 - Strongly Disagree (SD), 2 – Disagree (D), 3 – Neutral (N), 4 – Agree (A), 5 - Strongly Agree (SA)

Code	ITEM	SD	D	N	A	SA
	Institutional Support					
C1	The institution keeps my studying up to date	1	2	3	4	5
C2	The institution communicates to me in a timely manner	1	2	3	4	5
C3	I access study materials in a timely manner	1	2	3	4	5
C4	The course materials are appropriate and well designed	1	2	3	4	5
	Quality and Relevance of Student Orientation					
C5	The institution offers general orientation to students	1	2	3	4	5
C6	The institution offers digital literacy to students	1	2	3	4	5
C7	I find interaction with technology easy	1	2	3	4	5
C8	There are a wide range of devices that I use to access content	1	2	3	4	5
C9	Online platform allows easy interaction with content	1	2	3	4	5
C10	Platform used is user friendly as can be easily navigated	1	2	3	4	5
	Use of Technology					
C11	A range of devices can be used to access content technologically					
C12	Use of technology offers improved interaction and dialogue					
C13	Technology is matched to teaching and learning activities	1	2	3	4	5
C14	Technology is enhancing my knowledge	1	2	3	4	5
C15	Technology is improving quality of teaching and learning	1	2	3	4	5
C16	Technology does not give me a sense of fear, anger or helplessness	1	2	3	4	5
	Connectedness to other Students					
C17	Platform allows easy interaction with peers	1	2	3	4	5
C18	Platform promotes higher level thinking	1	2	3	4	5
C19	Peers are supportive	1	2	3	4	5
C20	Platform allows online sharing of knowledge with peers	1	2	3	4	5
C21	Platform allows evaluation of each other's ideas	1	2	3	4	5
C22	Platform allows monitoring of one another's work	1	2	3	4	5
C23	Gives feeling of connectedness to other students	1	2	3	4	5
C24	Allows easy participation in online study circles	1	2	3	4	5
C25	I find study circles beneficial	1	2	3	4	5
	Interaction and Communication with Tutors and System					
C26	Platform allows easy interaction with tutors	1	2	3	4	5
C27	Enhances two-way communication process	1	2	3	4	5
C28	Platform allows tutors to give timely feedback on assignments and examination results	1	2	3	4	5
C29	Platform reduces recurring incidences of lost scripts	1	2	3	4	5
C30	Platform allows provision of recorded student grades	1	2	3	4	5
	Academic and non-academic support					

C31	The staff are available for your convenience to offer academic and non-academic support	1	2	3	4	5
C32	The staff efficiency and willingness to help instils confidence in you	1	2	3	4	5
C33	The staff give you adequate individual attention	1	2	3	4	5
C34	There is immediacy of feedback and always try to address student requests as much as possible	1	2	3	4	5
C35	The support offered gives me a sense of belonging to a meaningful learning community	1	2	3	4	5

12. Please suggest any other areas on quality and relevance of student support that you would like the institution to pay more attention to

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_____END OF QUESTIONNAIRE_____

Thank you for taking your time to fill in the Questionnaire and participating in this Study

APPENDIX VI: INTERVIEW GUIDE FOR STUDENTS' FOCUS GROUP DISCUSSION

1. What are the characteristics and contextual elements of ODeL in your learning institution that have effects on your utilization of the ODeL learning mode?

2. What in your opinion on the quality and relevance of issues of ODeL that enhance student support systems in your institutions of study?

3. (a) Please identify the successes that have been associated with ODeL utilization within your period of study at this institution.

   (b) Please explain how these successes have affected your way of studying using ODeL delivery?

4. (a) What are challenges that you face in utilization of the ODeL delivery mode?
   (b) Please explain how the challenges have affected you and your studies?

   © How have you countered these challenges as a student?

   (d) Suggest what the institution can do to counter these challenges.

5. What are the opportunities and lessons that can be learnt in ODeL mode utilization that higher education institutions can adopt for improved student experiences?

6. Please suggest interventions the ODeL system can employ for improved student experiences in higher education institutions utilizing the delivery mode?

7. (a) Please suggest other areas that need improvement in ODeL delivery in your institution of study
   (b) Please suggest ways the suggested areas could be improved to contribute towards efficiency of ODeL delivery for improved student experiences

APPENDIX VII: INTERVIEW GUIDE FOR ODeL CENTER MANAGERS

INTRODUCTION

My name is Florence G. Sepula, a student currently pursuing a Master of Education degree in Leadership and Management at Mzuzu University, under the supervision of Dr Paxton Zozie. I am undertaking a research study entitled: *"Students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode: A study of selected Malawian public and private higher education institutions (HEIs)"* in partial fulfilment of the study programme. This study is expected to investigate students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode in selected Malawian public and private higher education institutions. The study is being conducted for academic purposes. Therefore, the information you provide will solely be used for academic purposes of this study and treated in the strictest confidence. You have been identified as a key informant and are kindly asked to participate freely.

SECTION A: - RESPONDENT PARTICULARS AND ODeL DELIVERY SYSTEM CONTEXT AND CHARACTERISTICS

1. Gender of the respondent

    Male ☐

    Female ☐

2. Could please state your position in this ODeL system

3. Could please state your responsibilities?

4. For how long have you worked in the current position?

5. What is your Highest Level of Education?

6. Please describe the requirements that the institution is supposed to meet before it is allowed to start offering education through ODeL delivery.

7. What is the mode of operation of the ODeL system in this institution?

8. How many students are currently enrolled in the ODeL system in this institution?

    Male ☐

    Female ☐

9. How many staff members are there to offer support to students in this ODeL system?

10. How many constituent units does the system have? Explain the units.

SECTION B: - STUDENT ENTRY REQUIREMENTS AND EXPETATIONS

11. (a) Please explain minimum entry requirements a student is supposed to meet to be enrolled
in the ODeL system of study.

(b) Please explain if the institutional facilitating conditions are to your desired levels.

(c) What is your view of the following quality, relevance and student support expectations of student enrolled in the institution's ODeL system?

    i)   *General administration of the ODeL delivery mode* (Student access to necessary information, Registration, Orientation, Fees)

    ii)   *Technology* (Use of study platforms, Cost of data)

    iii)   *Interaction with content, peers* (Access to technological gadgets, study circles)

    iv)   *Student Support Services* (Academic/Non-academic, Interaction with tutors, Tutoring hours, Library access, Assignments, Examinations, staff capacity and knowledge in handling student concerns/questions, staff training)

(d) What is your opinion on the influence of the attributes on student perception on the ODeL delivery mode?

    i)   *General administration of the ODeL delivery mode* (Student access to necessary
information, Registration, Orientation, Fees)

    ii)   *Technology* (Use of study platforms, Cost of data)

    iii)   *Interaction with content, peers* (Access to technological gadgets, study circles)

    iv)   *Student Support Services* (Interaction with tutors, Tutoring hours, Library access, Assignments, Examinations, staff capacity and knowledge in handling student concerns/questions, staff training)

SECTION C: - CHALLENGES, OPPORTUNITIES AND LESSONS LEARNT

12. (a) What is your opinion on the successes of the ODeL delivery mode in your institution?

(b) What is your view on what has contributed to the successes?

13. (a) What are the challenges that your institution has faced in trying to satisfy student expectations and satisfaction?

(b) What are the proposed solutions to these challenges?

14. What is your opinion on the opportunities that already exists that can be taken advantage of in ODeL delivery by both the institution and students?

15. What lessons have been learnt by the institutions on the ODeL utilisation that can be improved upon for improved student experiences?

16. Please suggest interventions the current ODeL system can employ for improved:
    (a) Student experiences
    (b) Student expectations
    (c) Student satisfaction
    (d) Student perceptions

_____ **End of Interview** _____

Thank the Interviewee for his/her Participation

APPENDIX VIII: KEY INFORMANTS CONSENT FORM

Research Topic: *Students' perceptions of utilisation of Open Distance and eLearning (ODeL) delivery mode: A study of selected Malawian public and private higher education institutions (HEIs)*

I hereby confirm that I have been well informed by study investigator FLORENCE G. SEPULA about the nature, conduct, benefits and risks of the study. I have also received, read and understood the participant information sheet regarding the study. I am aware that the results of the study will be anonymously processed and may, at any stage without prejudice withdraw my consent and participation in the study. I have had sufficient opportunity to ask questions and therefore; I declare that; I am more than 18 years of age and prepared to voluntarily participate in the study.

(Tick where it is relevant)

• I do agree to be audio-recorded /participate in the survey.   ☐

• I do not agree to be audio-recorded / participate in the survey.   ☐

PARTICIPANT'S

Signature ---   Date---------------------

I, **SEPULA Florence G.**, hereby confirm that the above participant has been fully informed

about the nature and conduct of the above study.

RESEARCHER

SEPULA Florence G.

Signature ---   Date------------------