

**EVALUATING THE QUALITY OF DISTANCE LEARNING MATERIALS IN SELECTED
UNIVERSITIES IN ETHIOPIA**

by

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submitted in accordance with the requirements for the degree of

DOCTOR OF PHILOSOPHY

in the subject

OPEN DISTANCE LEARNING

at the

UNIVERSITY OF SOUTH AFRICA

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AUGUST 2023

DECLARATION

I, Aderajew Mihret Tessema, declare that **“EVALUATING THE QUALITY OF DISTANCE LEARNING MATERIALS IN SELECTED UNIVERSITIES IN ETHIOPIA”** is my own original work, and that all the sources that I used or referred to have been documented and acknowledged by means of complete references.



AUGUST 2023

SIGNATURE DATE

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DEDICATION

This project paper is dedicated to my mom, Tsilalmuz Resom, who managed to defeat the burden of singleness while raising her children till we could find ourselves among those who have stood by themselves; my wife, Yordanose Eyassu, who has encouraged me to regain the energy that has enabled me to get back into an academic expedition which is thought to quench the thirst for knowledge; my ingenious children, Ammanuel Aderajew and Edna Aderajew, who managed to keep the momentum of securing being ranked students in their learning in one of the well-known private schools, Safari Academy, without the necessary guidance they should have obtained from me; and Mr. Efren Eyassu, my brother-in-law, who supported me to pay for the registration fee.

ACKNOWLEDGEMENTS

I am deeply grateful to my supervisor, Prof. Mapheleba Lekhetho, for his steadfast and evident support from the time I first connected with him until today. He has invested significant effort in guiding me through research and academic writing, contributing to the development of my current ability to articulate concepts and ideas. His rigorous feedback, commencing from the proposal phase to the completion of this research, has played a crucial role in shaping the content of this thesis. His encouragement, such as his words “keep working and we will take the thesis from there”, has motivated me to progress as an independent learner. I received pertinent reading materials and theses authored and supervised by him, along with other resources from Unisa’s repository, delivered through both the university’s email system and his personal WhatsApp account.

It will be a disgrace to those who participated in the study if I forget to recognise their contributions in the pilot study (which enabled me to get constructive inputs to correct some of the constructs of the questionnaires) and the welcoming support of Mr Tesfaye Mulugeta and Mrs Selamawit Abera in getting the questionnaires back from the respondents. My gratitude also goes to Mr Beakale Eshetu and Mr Alemayehu Teshome, for getting some of the questionnaires printed and duplicated to reach the respondents; Mr Birhanu Tafesse for lending me two very important books I referred to on research methodology and related issues; Dr Tsige Aberra, Director of Unisa- Ethiopia Branch for her supporting letter which enabled me to collect data from the institutions that participated in the study and officials of the institutions who accepted the request and provided the support needed.

I extend my appreciation to the entire staff of Unisa-Ethiopia Branch for their assistance in addressing any queries I had. My sincere gratitude also goes to Unisa’s facility for Doctoral Student Funding for awarding me bursaries which enabled me to handle some crucial activities of the project. Finally, my appreciation also goes to my siblings, mother-in-law, father-in-law, sisters-in-law, brothers-in-law who supported and encouraged me throughout my study.

ABSTRACT

Open and Distance Learning (ODL) has become the most innovative concept in the history of education and relies on self-learning materials developed by institutions. Moreover, the success and effectiveness of the programmes carried out via this system are anchored on the development, and use of high-quality learning materials. Many universities using the ODL approach recognize that distance learning materials inspire and provoke students to learn. Such experiences are built into the self-instructional materials using access devices and advance organisers which are thought to represent specific characteristics of the material and are compounded to make the self-instructional materials self-contained. This research was carried out to evaluate the quality of open and distance learning materials used by selected universities in Ethiopia. It also suggested recommendations as to what governing bodies and higher learning institutions should do to assure the quality of open and distance learning materials. The study used a mixed methods approach to achieve the objectives set forth and collected quantitative and qualitative data through questionnaires and document analysis. The target population of the study consisted of 744 subjects taken from four categories, and the ultimate sample size stood at 291. The course modules of the chosen distance teaching universities were also analysed against the standard rubric which has been accepted by the International Council for Open and Distance Education. As the findings revealed, except for one private higher institution, three institutions did not properly develop course materials that could serve ODL, which should ideally be self-instructional. The main factors contributing to the incompetency of the course writers were found to be their feeble attitudes towards ODL and the insufficient professional skills they acquired while developing the course materials. The study also recommends what the governing bodies and higher education institutions should do when developing distance learning materials and proposes a model that can be used to guide that process.

Key terms: open and distance learning; self-instructional materials; course writers; course coordinators; generations of distance education; and quality of distance learning materials.

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ACRONYMS AND ABBREVIATIONS

AAU	Addis Ababa University
ADB	Asian Development Bank
ASQ	American Society for Quality
BESO	Basic Education System Overhaul
CBDE	Computer-Based Distance Education
CC	Course Coordinators
CEMS	College of Economic and Management Sciences
CINIC	China internet Network Information Centre
COL	Commonwealth of Learning
CPE	Continuing and Professional Education
CRTVU	China Radio Television Video University
CW	Course Writers
DE	Distance Education
DICT	Digital Information Communication Technologies
DL	Distance Learning
EEDR	Ethiopian Education Development Roadmap
EEMA	Ethiopian Educational Media Agency
EFA	Education for All
EPG	Electronic Programme Guide
EPRDF	Ethiopian People's Revolutionary Democratic Front
ESC	Education Strategic Centre
ETA	Education and Training Authority
ETP	Education and Training Policy
EU	European Union
FDREC	Federal Democratic Republic of Ethiopia Constitution
GTP	Growth and Transformation Plan
HCEPR	House of Congress for Ethiopia Peoples' Representatives
HECPE	Higher Education & Continuing and Professional Education
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institutions
HERQA	Higher Education Relevance and Quality Assurance

ICDE	International Council for Open and Distance Education
ICT	Information Communication Technology
IET	Institute of Educational Technology
IGNOU	Indira Gandhi National Open University
IQ	In-text Questions
KEU	Kotebe Education University
LA	Learning Activities
MDE	Management of Distance Education
MDG	Millennium Development Goals
MED	Master's in education
MM	Mixed Methods
MoE	Ministry of Education
MoFED	Ministry of Finance and Economic Development
MOOC	Massive Open Online Courses
MRQ	Main Research Question
NAAC	National Assessment and Accreditation Council
ODE	Open and Distance Education
ODeL	Open Distance e-Learning
ODL	Open and Distance Learning
OECD	Organisation for Economic Cooperation and Development
OER	Open Educational Resources
OI	Online Instruction
OLCS	Online Learning Consortium Standards
OUC	Open University of China
OOUK	Open University of the United Kingdom
PA	Professional Association
PVR	Personal Video Recording
QM	Quality Matters
QMR	Quality Matters Rubric
RGCDVL	Renaissance Global College of Distance and Virtual Learning
SCE	Self-Check Exercises
SDG	Sustainable Development Goals

SDL	Self-Directed Learning
SIM	Self-Instructional Materials
SOL	Student-On-Line
SOU	State Open Universities
SPSS	Statistical Package for Social Scientists
SRQ	Sub-Research Question
STRIDE	Staff Training and Research Institute of Distance Education
THES	The Times Higher Education Supplement
TTI	Teacher Training Institutions
UCGH	University of the Cape of Good Hope
UHI	University of Highlands & Islands
UNESCO	United Nations Educational, Scientific and Cultural Organisation
Unisa	University of South Africa
UoL	University of London
USA	United States of America
UU	Unity University
VOD	Video-on-Demand
Note: Depending on where it is deemed appropriate, the terms DE, DL, ODE & ODL are used interchangeably in this study.	
Referencing Abbreviations	
cf.	consult, also see (note in book)
df	Degree of Freedom
et al.	et alia – among others
t _c	t-Test Critical
t _s	t-Test Statistics

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

Modern education has existed for many years in Ethiopia and has played a critical role in the socio-economic development of the country. Over the last 20 years, Ethiopia has been working aggressively on the expansion of schools and universities guided by the country's Millennium Development Goals (MDG) and later the Sustainable Development Goals (SDG) meant to expand access to basic education to all by 2015 (Ministry of Education (MoE), 2018:87). However, it has faced difficulties in efforts to meet the Education for All (EFA) goals (EFA, 2015:3-4). The national review, EFA (2015:3) has also emphasized that quality is a crucial challenge at higher education level and demands high-quality instruction, other human and material resources and a focus on reform processes to be able to meet the MDG. Regarding the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDG) that Ethiopia adopted in September 2015, UN Ethiopia (2023) reported that the country has ardently popularised, aligned the SDG with the Second Growth and Transformation Plan (GTP II) which spans from 2015/16 to 2019/20 and is implementing them. Ethiopia has also taken part in the 2017 Voluntary National Review (VNR) on the SDG meant to review how the SDG are incorporated into the national and sub-national development plans and implemented. Having received comments at the High-Level Political Forum in New York in July 2017, Ethiopia has formulated a 10-year perspective development plan for the period 2019/20 to 2029/30 which is fully aligned to the 2030 agenda and the SDG (UN Ethiopia, 2023).

Three years after the national report made by EFA, the study undertaken by MoE (2018:87) links this problem to the lack of a sufficient number of suitably qualified professionals in the education system. Having understood the shortage of qualified and competent experts at various levels, Ethiopia has embarked on an urgent expansion and increased student enrolments in higher education institutions (HEI) to improve education quality, access, affordability, equity and efficiency. Such engagements create a fertile ground for the expansion of ODL in HEI (Clemence, 2015:26).

Distance education (DE) in Ethiopia is not a recent phenomenon and researchers have traced its beginning to various times though they are not significantly far apart. According to Cherenet (2008:31), DE was initiated in the 1950s to reach adults in secondary schools through correspondence courses who were working in different organisations like factories and the

Ministry of Defence. To achieve this, the Government of Ethiopia signed a bilateral agreement with the United States of America (USA) to cooperate on education programmes. Cherenet explained further that the system of DE was then formally started at the former Haile Selassie-I University and lasted from 1968-1972 in producing printed materials to offer correspondence courses to schoolteachers in English, mathematics and science. For his part, Yalew (2004:131) said DE in Ethiopia started in the 1940s with a purpose of overcoming the limited coverage of conventional schooling to upgrade the level of primary school teachers while on their jobs. For Fisseha (2006:9-10), DE in Ethiopia started at the onset of the nineteenth century when the country chose the system to train unqualified primary and secondary school teachers. The opening of DE in Ethiopia is also traced back to 1967, the time when MoE entered into an agreement with Addis Ababa University to create a correspondence education unit to develop senior secondary correspondence courses for adults who were working in different organisations, most of whom were teachers (Sekar & Nigussie, 2020:28). Tilson and Bekele (2000:29) concur with Cherenet (2008:31) regarding the origin and establishment of the audio-visual centre. The centre was meant to develop, produce and distribute audio-visual teaching aids to secondary schools and had a mobile team that was supposed to move to villages to show films and slides.

According to Tilson and Bekele, Ethiopia started broadcasting educational programmes for primary and secondary schools in 1965, a year after the introduction of TV in the country. In 1967, the audio-visual centre was redesignated as the Educational Mass Media Centre which was later renamed Education Media Agency (EMA) with its own TV studio that produced programmes in eight subjects for senior secondary schools and in five subjects for junior secondary and primary schools. Most importantly, EMA's radio and television programmes were an accepted part of the school curriculum throughout the country and the radio and television programmes were prepared, among others, to support the DE secondary level programme for out-of-school youth and adults and to develop new non-formal programmes to upgrade the qualifications and skills of primary school teachers (Tilson & Bekele, 2000:29). In 1998, Addis Ababa University initiated postgraduate programmes through DE for two master's programmes in education: in curriculum studies and educational management (Sekar & Nigussie, 2020:29).

According to MoE (2020:27), the Higher Education Policy and Strategy of Ethiopia was established in terms of the constitution of the Federal Republic of Ethiopia. It recognizes the right to education as a human right (FDREC, art 901) which makes DE to be considered one of the modalities to offer higher learning in several government and private colleges and universities of the country. Nonetheless, a recent report of the government that was made on 6 April on Ethiopian

Television [ETV] asserted that the accreditation of some of the higher learning institutions has been under question (Admassie, 2019). There are also others which have established cross-border orientation in the provision of ODL like Unisa and Indira Gandhi National Open University (IGNOU) delivering courses for different programmes.

In January 2016, the Education Strategy Centre of the Ministry of Education developed a concept note to reform the education sector in accordance with the national vision and national development goals (MoE, 2018:3). A team composed of concerned, knowledgeable and reputable scholars from different sectors was formed to come up with a proposal as to how the reform could be executed. Putting together the collected information from the desk reviews, field visits, benchmarking visits to Vietnam and Malaysia in 2017, and incorporating various consultation inputs, the team reported its proposal to the House of Congress for Ethiopia Peoples' Representatives (HCEPR). (MoE, 2018:9). Members of the team defended their report in line with the context of the intended Growth and Transformation Plan (GTP) of the country (MoFED, 2010:9-11) and welcomed enriching constructive opinions of the educated group of people of the country before it was launched as the Ethiopian Education Development Roadmap in 2020 to serve for the period: 2018-2030 (MoE, 2018:5). According to the report of the team, during the previous 15 years, there had been a significant expansion in the Ethiopian Higher Education (HE) system. This expansion was marked by harmonisation of undergraduate curricula, introduction of modular teaching, continuous assessment, peer learning and the establishment and operation of quality assurance mechanisms to enhance and assure the quality of HE (MoE, 2018:52). However, these activities have little positive impact on the quality HEI core processes, namely teaching and learning.

The quality of education has been under question across the HE system in Ethiopia. The identified quality problems exist in regular, continuing and ODL programmes as well as in public and private HEI. The report of the team has shown that the decline in the quality of education is greater among private continuing and ODL programmes compared to regular and public education programmes. The report also highlighted that universities do not seem to have strategies and tactics to prepare programmes requiring intensive use of information technology for learning purposes such as online education. It also mentioned poor connectivity and a lack of technical expertise in properly developing and using information and communication technologies (ICT) for academic and research purposes as the main challenges.

Regarding the development of ODL materials, nothing worthwhile has been said other than mentioning that “organisation of modular materials is found to be weak” (MoE, 2018:56). It has been merely suggested that to implement a modular approach properly, university staff need to be continuously trained on how to identify the required competences, how to prepare modules and how to apply the teaching methodologies that emphasise learning rather than teaching (MoE, 2018: 58). Moreover, the roadmap has not addressed how the quality of ODL could be met other than mentioning that a decline in the quality of education is greater in continuing and ODL programmes while broadly reflecting on different components of conventional teaching approaches. Besides the above study, the only document I found talking about self-instructional materials (SIM) was my own unpublished master’s dissertation. The study showed that print-based ODL materials for physics courses (which were prepared by MoE of Ethiopia to upgrade primary school teachers to diploma level through ODL system) lacked the fundamental characteristics of SIM (Tessema, 2004:112).

I believe that the quality of education is measured by the quality of the inputs drawn into the education system. This study sought to evaluate the quality of SIM used by selected HEI in Ethiopia.

1.2 RATIONALE FOR THE STUDY

The primary purpose of this study was to evaluate the quality of distance teaching materials used by selected Ethiopian HEI against the basic criteria that are mostly accepted and are serving as measurement tools. It also intends to study the kind of professional development that the course writers (CW) require that would enable them to develop the so-called self-instructional modules. Lockwood (1994:90) stated that learning materials for ODL should be prepared in such a way that they consist of a tutorial-built-in structure so as to give maximum attention to interaction. Lockwood believed that the easiest approach to make it practical is getting the activities that students are supposed to learn ahead of writing or locating the subject matter to be completed. Paul and Jefferson (2019:6) depicted that no significant difference exists in student performance between the two mediums (traditional and ODL), and HEI may, thus, make the gradual shift away from traditional instruction. They also suggested that ODL captures a larger worldwide audience if administered correctly. This shift to ODL could lead to a larger buyer population, more cost efficiencies and increased university revenue.

While working as a senior course editor of ODL modules and as an invited trainer for modular preparation on ODL at different government and private universities (Addis Ababa University,

Adama Teachers' College and Bale Robe Teachers' College [government institutions], and St. Mary's University [a private institution]), the researcher realised that most ODL modules (print-based ones), if not all, lacked the fundamental characteristics of SIM, and ODL was being run without following the philosophy that guides the process as to how the system should be managed. The ODL system in these institutions was embedded in the already established conventional universities, and training materials were being prepared by conventional school instructors who lacked the appropriate knowledge and skills on the attributes of DE. Moreover, they generally had a negative attitude towards ODL and did not regard it to be on par with conventional learning. As such, it is assumed that the training materials have not been serving their intended purpose because of their poor quality. This situation hampers the ODL system, thereby contributing to the decline of the quality of education of Ethiopia.

The second and bigger aim was to recommend to the MoE of Ethiopia to address the results of the study at a national level so that all the inputs and outputs of ODL could be scrutinised by experts qualified in the field of ODL. This would enable the system to be accountable to the bureau that structures the curriculum for different levels of education. The researcher believes that ODL as a system should be led by professionals in the field of study so that the system can acquire the same status as conventional education and improve the quality of education in the country.

1.3 PRELIMINARY LITERATURE REVIEW

1.3.1 Distance Education

Education is a major social institution with a fundamental role to bring about broad social change and facilitate change in society (Chakraborty, 2018:2). It is also a conservative institution to the extent that it is concerned with fostering established values and knowledge in the emerging generations (Dewey, 2001:74). Access to education in developing countries like Ethiopia is one of the biggest problems and their future depends on how quickly and effectively a national system of education can be developed. This implies a radical change of direction, content and method in the existing education systems.

During the last few decades, educationists and educational planners have experienced a growing interest in new forms of education, particularly in developing countries. Old, well-trying, face-to-face methods (conventional ones) have been found to be inadequate in meeting the demands of groups of people wishing to take advantage of the expanding field of education. As a result, there has emerged a series of relatively new education methods and strategies which have been grouped

together under the collective name of instructional technology (IGNOU, 2012:40). Strictly speaking, these have emerged as an attempt at modifying the rigidity of the traditional educational process. The same learning materials (IGNOU, 2012:40) indicate that an alternative system of education that instils new life into the education system, with its innovations, is open and distance learning.

DE, according to Keegan (1986:3), has a history that can be traced back to the early 1700s in the form of correspondence education. Moore and Anderson (2003:88) claimed that organised DE began about 150 years ago to bridge the gap between educational needs and provision using print materials delivered through postal services. However, a newly awakened interest in this form of education only became apparent over the last few decades. "DE, first and foremost, is a movement that sought not so much to challenge or change the structure of higher learning, but a movement to extend the traditional college/university, a movement to overcome its generic problems of scarcity and exclusivity" (Minichiello, 2016:28). It was developed when convocation, which serves as an organisation concept for the university, had reached its natural limit (limit in size and limit in resources).

At university level, since its inception, DE has gone through different stages or paradigm shifts which could be categorised into first, second and third generations (Manson, 2018:263). The first generation was the stage of DE, which comprised the classical correspondence model in which learning the content of the courses dominated. The second generation placed greater emphasis on the instructional quality of multimedia course materials and other forms of student support services. The third generation was built on the second generation, but in addition, used the internet and other electronic technologies to make electronic multimedia database, automated assessment and various electronic forms of delivery and support services generally available to students. The name given to this system of learning is ODL. ODL refers to the openness of the DL programme with the notion of enabling learners to pursue their learning giving emphasis to their interests, pace of learning and their computer and internet knowledge and skills. According to Abramson (2021:45), learners with anxiety or shyness prefer the ODL platforms to the conventional setting as the social pressures of being encircled by peers in the latter can make it difficult to concentrate on academics. Huang et. al (2020:5) also avowed those students with disabilities benefit from ODL as it avoids the challenge of travelling to classrooms and enables them to attend their learning in a familiar, comfortable environment such as home.

In the twenty-first century, all aspects of education are assisted by ICT, and according to Diallo and Wright (2013), new types of learners and learning are emerging through online communities,

which have made it feasible to provide DL using Open Educational Resources (OER) and created the ODL system. A recent development of this open learning movement is Massive OpenOnline Courses (MOOC) which have drawn much attention from both the academic and the public spheres. The MOOCs are neither self-governing as they require the follow-up by the institutions for proper provision of learning materials, nor they are detached experiences of online learning as they are retrieved digitally. According to Qayyum and Zawacki-Richter (2018:127), the MOOC are rather tightly affiliated to online education and lifelong learning as they have the potential to avoid obstacles facing the learning community in accessing education to the needy equally and seek to foster the liberalisation of knowledge.

Computing and communication technology have ushered in sweeping changes since their inception and advances in the use of wide-area communications. Data compression technology has introduced a variety of new digital technologies like email and the World Wide Web (WWW). Email and the WWW have enabled the learning providers to develop innovative practices. Digital television is one of the recent developments, and according to Dos Santos, Do Vale and Meloni (2006:2), it is the amalgam of television and the WWW, and enables the learner to browse the internet via television. Dos Santos et al. (2006:2) explained that the search for and choice of various multimedia content have become easier for learners through complementary digital technologies such as video-on-demand (VOD), personal video recording (PVR) and electronic programme guide (EPG).

Although technological innovations and advancements have brought a massive transformation in society at large, the impact of technology on education, teaching and learning has been rather disappointing or limited. Fernando (2018:1) concurred with this observation and contended that while expectations were high, integrating the latest state of ICT in the teaching-learning experiences, “showcasing” learning environments and technology-supported learning that merely replicates face-to-face teaching of day schools seems to disengage the majority of students.

Despite all the advancement of technology in the delivery of DE, distance learners still face challenges that hamper their learning and exacerbate their drop-out. The main challenges, as indicated by many researchers, are the absence of direct real-time feedback from the students or teachers; the clumsiness and uninviting nature of the learning materials for reading (a lack of interaction, dialogue and live feedback on exercises); services provided to learners such as delivery of course material, conduct of examinations and publishing of results; and the mindset of people towards open education that really matters (Swaraj, 2012:1). One of the greatest

challenges that distance learners from most African countries face is insufficient or unstable internet connectivity followed by inadequate computer labs, lack of computers/ laptops and technical problems (Zalat, Hamed & Bolbol, 2021:5). This scenario hinders the larger part of Africa from coping with the growing number of citizens seeking education in the context of the dynamics of information technology. Irrespective of the challenges, the performance of students attending conventional and open universities should not be determined by the nature of the universities they attend as there are students from the latter doing better than those attending the former (Swaraj, 2012:1). He further argued that India has acknowledged that degrees offered by open universities are equivalent to those provided by conventional universities for jobs in companies owned by the government and private organisations.

1.3.2 Course Quality Standards In ODL

It is a routine procedure in conventional schools to monitor a teaching-learning activity at its input, process, and output stages to ensure that the system incorporates new techniques and innovations that can address the educational goals best. This procedure has been given serious attention in ODL as it puts teamwork at the centre to reach many learners from different backgrounds and interests. Different types of expertise are combined to produce high-quality learning materials and make them accessible to learners via relevant media. Quality standards or rubrics, consisting of a set of criteria have been used to guide HEI offering ODL to evaluate course materials and improve online and blended courses (Ekren, 2017:19). Many assessment techniques have been developed to identify course quality standards (rubrics) or guidelines in ODL. The researcher reviewed five of the most basic and recent ones (cf. Section 1.3.3). The standards share some common goals: advancing the standard of ODL courses by standardizing course information, provision of support to learners and accessing resources. Quality matters rubrics for higher education and continuing and professional education (QMRHECPE) have been found to be relevant to this project based on its orientation as discussed in detail below.

1.3.3 Quality Matters Rubrics for Higher Education and Continuing and Professional Education

A quality assurance organisation initiated by a small group of colleagues in the Maryland Online Inc., QMRHECPE was set up to answer the question which has been a common problem of educational institutions: “how do scholars measure and guarantee the quality of a course?” (Ekren, 2017:19). Quality Matters (QM) provides non-profit subscription services which allow adaptation of different evaluation rubrics for HE, continuing and professional education, K-12 and

educational publishing. Each rubric focuses on a unique section of the material under supervision: course overview and introduction, learning competencies, assessment and measurement, etc. The Higher Education and Continuing and Professional Education (HECPE) rubric provides criteria for evaluation on the following five standards: learning objectives (competencies), assessment and measurements, instructional materials, course activities and interaction and course technology, which should be used together to ensure that the desired outcomes of learners' attainment are met (QM, 2014).

Online learning consortium standards

The Online Learning Consortium Standards (OLCS) have been specifically oriented to provide criteria useful for evaluation of online programmes (Ekren, 2017:20) and serve the USA in enhancing the quality of its HE system by internationalising online education.

- **E-campus Alberta e-learning rubric:**

According to Ekren (2017:20), the e-Campus Alberta e-learning rubric was introduced into the education system in 2000 to support the quality of online curriculum. Its objectives were to determine the standards of online courses, the standards of support being given to ODL by institutions both in providing access to courses and administrative measures in the context of post-secondary level education. It was then restructured in 2013 and referred to as "Quality Standards 2.0" (Ekren, 2017:20). The modified rubric was drafted to assess the quality of existing courses and those that are still in the development process. Ekren further mentioned that Quality Standards

2.0 has also been a guide for a faculty to manage its course provision online, and for curricular experts to design instructions.

- **The Chico rubric**

According to Ekren (2017:20-21), the Chico rubric is an instrument in creating or evaluating the design of fully online or blended courses. It was drafted by a group of experts and students brought together from Chico State faculty of California State University in 2003. This rubric was revised in 2009 to assess the organisational activities required in the design and delivery of online courses and support the effort of the faculty in the development of Online Instruction (OI) expertise.

The online course evaluation project standards (OCEP)

Finally, Ekren (2017:20) explained that OCEP is a tool for assessing and comparing the quality of online courses delivered in HEI. It is different from other rubrics described above. The categories such as “course developer and distribution models” and “developer comments” are not provided by the other rubrics. The focus areas of OCEP are the approaches in instruction and communication, techniques of content presentation and the art of teaching and learning aspects of online courses.

After analysing the existing criteria determining course quality in ODL in the context of higher education, this study has been aligned with QMHECPE rubrics as they have relevant measuring tools to achieve the aim of the study. QMHECPE focus on andragogy (i.e., adult education principles) in terms of how instruction is delivered, and the medium used for delivery of ODL courses to learners. They call for different experts to work together on the selection of courses, choosing the instructional design aspects of courses, and evaluating the appropriateness of the subject matter and the scope of courses. This study was guided by the research question, “What is the quality of ODL materials used by the selected Ethiopian universities?”. It adapts and applies the QMHECPE rubrics released during 2013-2015, to triangulate the results of the quantitative and qualitative approaches used to answer the research question.

1.3.4 DE and Adult Learners

The ODL mode requires responsible and committed learners which are vital attributes of adult learners. This holds significance because ODL predominantly serves the educational requirements of adults who might not have access to traditional learning due to various hindrances. These obstacles prevent them from enhancing their educational level and qualifications through conventional means. Knowles (1990:30) outlined the characteristics of adult learners which have been used in developing some guiding rules for compiling post-school learning materials. He emphasised that course designers who adhere to these guidelines can produce high-quality ODL course materials provided that they address the following issues:

1. What makes adult learners different from those who attend schools at an early age?
2. How do instructional designers consider these differences while developing courses?

Below is a list of six characteristics of adult learners, as identified by Knowles (1990:31):

1. Adults are aware of why they are learning.
2. Adults recognise themselves as accountable and independent people.
3. Grown-ups have accumulated a wealth of experience and return to school with a purpose in mind.
4. Grown-ups prefer to learn when they feel they are comfortable to learn.
5. Adult learners focus on problem-solving approaches.
6. Adults are driven by factors arousing their curiosity and return to formal education, most importantly to improve their living standard.

As the Commonwealth of Learning (COL) (2005:8-9) noted, the distinct characteristics of adult learners have implications for instructional design. From this perspective, instructional designers responsible for post-school courses should incorporate opportunities for adult learners to recall their past learning experiences and practices. This approach should also encourage them to voice their viewpoints and establish connections between past knowledge and experience with the courses they are currently participating in. This means that they should design curricula targeting learners' needs. They should also find the approaches that allow learners to determine their own choices and thereby become self-directed learners, enabling learners to make choices and direct their own learning. However, this is quite difficult to incorporate into learning materials as it is both costly and multifaceted. Encouraging learners to determine their own goals, to stick to the goals, to assess the changes they bring about, and propose alternative mechanisms that align with learners' experiences to enable them to complete their assigned tasks are also concerns of instructional designers.

Most of the research conducted in the developed world on adult learning has been done on learners of small groups, mostly from the middle-class (COL, 2005:10). This limits our understanding of adults' learning behaviour because they seem to ignore that fact that the larger population of adult learners is found in developing and underdeveloped countries (UNESCO-ILL, 2022:19). It is important to consider certain learning principles while designing instructional materials for ODL to make them compatible with the constructivist theory of learning. This theory underlines the fact that learning encourages engagement of learners with activities, which fosters the development of task-oriented learning materials to enable the learner to internalise the intended content of the course. It also emphasises that learning should include feedback as the

latter enables learners to assess what they have learned and motivates them to keep learning and monitoring their progress.

1.3.5 Characteristics of Self-Instructional Materials

In ODL, the development of good-quality learning materials requires careful consideration of instructional design, accessibility, interactivity, and alignment with the learning objectives to facilitate effective and engaging distance learning experiences for students (Misanchuk, 1994:2). Moreover, the production of effective learning experiences with quality learning materials is possible if the characteristics of learners and their profiles are critically analysed and taken as inputs before starting the instructional design process (COL, 2005:35). The quality of ODL course materials is measured mainly against whether they are self-instructional in nature. ODL course material is self-instructional if it is self-explanatory, self-contained, self-directed, self-motivating and self-evaluating (Jayaram & Dorababu, 2015:21929).

Literature on effective development of SIM in ODL institutions in Ethiopia is discussed in detail in Chapter 3 under Section 3.4. It outlines how ODL materials are developed including the characteristics that can address self-learning principles.

1.4 THEORETICAL FRAMEWORK

This study is underpinned by two main theories which have direct links with the development of course materials for ODL. I found that Moore's transactional distance theory and the constructivist theory of learning complement each other in making the development of SIM interactive through actively engaging the learner with the material. Based on these theories, this study developed a conceptual framework which enabled the researcher to create a model for the development of course materials for ODL. In Chapter 2, the views of different theorists and philosophers are discussed, and the components and aspects of ODL are addressed.

1.5 STATEMENT OF THE PROBLEM

In 2001, while I was a conventional instructor for General Physics Courses at Gondar Teachers' College, I participated in Project 17000 (DE Project for Second Cycle Primary School Teachers) organised by Educational Media Agency (EMA) of the Ministry of Education. The goal was to alleviate a shortage of teachers in the second cycle and equip them with appropriate professional skills for the required level. The programme was scheduled to develop DE materials in modular forms and provide training, which divided the courses into modules dealing with segments of three

to five interrelated chapters. The task involved writing an introduction and objectives for each module, and each chapter; writing the overviews for each sub-chapter; and providing access devices for each activity found in each module and self-check exercises together with suggested answers for the latter. However, the training time was too short, and the skills imparted to the instructors were inadequate to enable them to grasp the scope of their work. Furthermore, some conventional school practitioners were resistant to change, and a lot of time was spent trying to explain the concept of ODL.

In my master's research, I found that most of the modular physics course learning materials prepared for Project 17000 lacked the necessary attributes of an ODL material (Tessema, 2004:112). The study also revealed that the programme was not properly managed; hence, the project could not be sustained for the intended period and finally it folded before training the required number of primary school teachers. The investigation also established that a module lacking the core elements of a distance learning package could not be self-instructional which showed that the materials were not relevant for self-learning purposes. A recent study by the MoE (2018:52) confirmed the researcher's findings that the quality of education in Ethiopia's HE system is questionable. The identified quality problems exist in regular, continuing and ODL programmes as well as in public and private HEI.

According to the report, the decline in the quality of education was greater among the private continuing and DE programmes than the regular and public education programmes partly because of poorly organised modular materials (MoE, 2018:56). The report also emphasised the importance of providing continuous training to university staff on the required competences, preparation of modules and application of teaching methodologies that emphasise learning more than teaching (MoE, 2018:58) in order to implement a modular approach in their respective universities.

This study sought to evaluate the quality of ODL materials used by selected Ethiopian universities, focusing on their self-instructional nature. The quality of ODL provision in Ethiopia suffers due to insufficient and ineffective support services, management of multimedia instruction, two-way communications, and overall management of the system. However, these aspects were not covered by this research as they fell outside its scope.

1.6 RESEARCH QUESTIONS MAIN QUESTION:

1. What is the quality of DL materials used by the selected universities in Ethiopia?

Sub-questions:

1. What characteristics of DL do the materials of selected universities have?
2. Do the DL materials of selected universities meet the set criteria for ODL materials?
3. How do public and private ODL institutions satisfy the definition and attributes of self-learning?
4. What type of ODL professional development do writers of ODL materials receive?
5. How can the Ministry of Science and Higher Education and HEI devise mechanisms that assure the quality of SIM in ODL institutions?

1.7 AIM AND OBJECTIVES OF THE STUDY

The aim of the study was:

To evaluate the quality of distance learning materials used in selected universities in Ethiopia.

The specific objectives of the study were:

1. To determine the existing characteristics of ODL materials being used by the universities selected for the purpose.
2. To compare the ODL materials used by the selected universities against the rubric that is accepted by ICDE to serve as a gauging tool for quality SIM development.
3. To compare the selected government and private universities vis-à-vis their extent towards satisfying the philosophy of self-learning.
4. To explore the level and depth of professional development provided to the CW in the field of ODL.
5. To identify the fundamental features lacking in the ODL materials used by selected universities.
6. To recommend to the government of Ethiopia the necessity of establishing ODL professionals' association to consult and share the responsibility of managing the system of ODL.

1.8 SIGNIFICANCE OF THE STUDY

The researcher assumed that the quality of open and distance education course materials used by selected HEI in Ethiopia was poor and did not serve its intended purposes. Thus, the findings of this study are expected to create enabling approaches to help HEI working via ODL to prepare open and distance course materials as addressed by the paradigm. The study confirms research by Yousuf et al. (2008:131-133) regarding the knowledge and skills ODL module writers should have and, hence, targeted describing those professional skills needed by CW to be able to develop ODL materials. This study also planned to develop a model that could help guide HEI working in the ODL system on how to produce self-instructional course materials. Findings of the study are also meant to direct the governing body under MoE to devise a tool to monitor the implementation of ODL. Finally, crafting a rubric addressing those eight General Standards (QMHE Rubric, 2020), currently accepted globally (cf. Section 5.4) to evaluate the quality of ODL course materials might help those coordinating the programme to create their own strategies which guide them in the preparation, implementation and execution aspects of development of ODL course materials. It is also believed that the suggestions addressed by the study invite interested groups to conduct studies to fill the gap this study did not address.

1.9 RESEARCH METHODOLOGY

The researcher assumes that the focus of the study, namely evaluating the quality of instructional materials in an ODL context, is a complex exercise that requires a multidimensional and robust research methodology. It requires both quantitative and qualitative methodologies. i.e., a mixed methods approach. Specifically, a survey design, questionnaires and document analysis were applied to gather numerical and rich data for the study. The survey design was executed through questionnaires to gain an overall picture of the phenomenon and rich data was obtained as required. Furthermore, data was collected through document analysis to augment the main data. According to Chaumba (2013:326), a mixed methods approach allows for comprehensive analysis of phenomena, and enhances the validity of the finding by reducing the weaknesses of using either quantitative method or qualitative method alone. Gobo (2023:3), however, argued that if mixed methods research is to be a truly third way, mixed methods investigators should increase their efforts to integrate the quantitative and qualitative methodologies into a new, distinctive and authentically mixed approach.

1.9.1 Research Design

A research design, according to Khanday and Khanam (2019:367), is a framework of methods and approaches preferred by a researcher to combine various components of research in a sensibly rational way so that the research problem is efficiently handled. They further described it as a procedural plan that provides insights about “how” to conduct research using a specific methodology. Creswell (2009:23) described it as a plan or a proposal to conduct research involving the intersection of philosophy, strategies of inquiry, and specific methods. He said that it is a framework consisting of three components working harmoniously together to fit the study. It entails the philosophical assumptions that help researchers think of ways of approaching the study; the strategy of inquiry that is selected to relate to the worldview and the specific methods or procedures of research that can be used to translate the approach into practice.

The study used a concurrent triangulation mixed methods strategy to get a complete understanding of the phenomenon from both qualitative and quantitative perspectives. In so doing, the researcher merged the analyses generated from both approaches and integrated the information while interpreting the overall findings. The findings were triangulated to examine various aspects of the topic, drawing insights from the viewpoints of students, course writers (CW) and course coordinators (CC). These insights were gathered through questionnaires and document analysis. An adapted rubric, comprising statements with attached scores was used as a benchmark for evaluating the quality of self-instructional materials created for Open and Distance Learning (ODL). According to Fusch, Fusch and Ness (2018:26), triangulation is the way in which one explores different levels and perspectives of the same phenomenon. It is a method by which the validity of the study results is ensured.

Furthermore, research paradigms guide researchers to carry out scientific discoveries based on the assumptions and principles they are inclined to (Park, Konge & Artino, 2019:690). They further stressed that recognising specific paradigmatic assumptions helps researchers to determine the quality of findings that support scientific studies and identify gaps in generating sound evidence. When researchers strive to answer research questions, they seem to be oriented towards one of the following major types of paradigms: the positivist, the interpretive, the critical or the afro-centric paradigms (Moyo, Modiba & Simwa, 2015:60-61).

This study focused mainly on answering the ‘what and how’ research questions based on their consequences which are the concerns of pragmatist researchers. The mixed methods research is associated with pragmatism or an understanding that it opens doors to multiple methods,

different worldviews, different assumptions and different forms of data collection and analysis (Creswell, 2009:28). This study adopted a descriptive survey design which enabled the researcher to explore how selected universities in Ethiopia maintain the quality of ODL materials.

1.9.2 Population, Sample and Sampling Methods

A population is a set of all the units which exhibit similar characteristics and for which the results generated from the research can be generalised (Shukla, 2020:2). According to Bhattacharjee (2023:72), a population entails “all people or items (unit of analysis) with the characteristics that one wishes to study. The unit of analysis may be a person, group, organisation, country, object or any other entity that you wish to draw scientific inferences about”.

The study encompassed a population of 600 students pursuing their Bachelor of Arts (B.A.) degrees in management at two government Higher Education Institutions (HEI) and one private HEI. Additionally, students studying Information and Communication Technology (ICT) education at one other government HEI, spanning from the second to the fourth year of study, were also included. These students were enrolled in the Open and Distance Learning (ODL) system. Similarly, 40 lecturers who participated in writing distance course materials, eight coordinators who managed distance and online education at the HEI and 96 course modules (24 modules from each institution) which were used as learning materials for the specified fields were also targeted to comprise the study population. As presented in Table 1.1, the sample included 235 senior students (determined using random and stratified sampling techniques), 16 lecturers (purposely selected) and all eight programme coordinators (purposely selected) and 32 course modules (purposely selected). Table 1.1 presents the composition of the samples making the target population.

Table 1.1: Target population vs actual sample

Research group	Target population	Sample size/research group	%
Students	600	235	39.2
Course writers	40	16	40.0
Coordinators	8	8	100
Modules	96	32	33.3

The study could have been more significant if it had included all the relevant participants; however, because of cost, time and the remote location of some participants, it only covered institutions which were geographically reachable. According to Prabhat and Mishra (2015:40), the objective of getting a smaller group or a sample of the population of interest, is to obtain accurate and reliable information about the universe with the minimum cost, time and energy and to set out the limits of accuracy of such estimates.

1.9.3 Data Collection Methods

The study integrated data collected from four different sources (students, Course Writers [CW], Course Coordinators [CC]), and modular materials of ODL and applied instruments (questionnaires and document analysis) that could enable the researcher to gather the intended information from the respondents. The methods used to collect quantitative and qualitative are discussed next.

1.9.3.1 Method of data collection for quantitative research

The study used two questionnaires: one for students and the other for course writers/coordinators, both of which consisted of closed and open-ended questions. The students' questionnaire had 236 items categorised into three parts and the course writers/coordinators' questionnaire was made up of 72 items categorised into four parts. The questions required 'yes or no' responses, while some required selecting appropriate answers and others used Likert scales.

1.9.3.2 Method of data collection for qualitative research

The open-ended questionnaires and document analysis were used to gather data for qualitative analysis. A comprehensive rubric of QM™ which is used to evaluate the quality of ODL materials, was obtained through written permission (cf. Chapter 4). The adopted rubric was used to analyse the level of appropriateness of the course modules selected for this project. Some of the data collected were quantified to give meanings for transcription purposes.

1.9.4 Data Analysis and Interpretation

1.9.4.1 Data analysis

According to Kelley (2023:1), data analysis is a research approach executed to clean, change and process raw data to extract actionable, relevant information that helps researchers make

informed decisions. This research followed these steps to generate meaning from the quantitative data collected through (questionnaires, administered on distance learners, CW and course coordinators) and qualitative data gathered in carrying (document analysis on the ODL materials). Then the data were analysed by using different statistical techniques for the quantitative strand and concept analysing methods for the qualitative strand.

- Quantitative data analysis

The responses from the participants were generated through questionnaires which were edited to clean the data, followed by data coding, which entailed pre-testing. Coding was verified and fed into a computer that used the software IBM SPSS Statistics version 27/28 version. The study carried out the χ^2 and independent sample t-tests on certain parts of the questionnaires intended to provide answers to the research questions.

- Qualitative data analysis

An analysis of qualitative data seeks to answer 'how' and 'why' rather than 'what' or 'how often' questions (Mattimoe, Hayden, Murphy & Ballantine, 2021:2). They further discussed that qualitative studies involve collecting rich data that is recognised within the framework and are linked with an interpretivist viewpoint. In this study, the responses to the open-ended questions were observed for their patterns, the themes representing the patterns were identified, and then grouped systematically to portray meanings. Similarly, under a document analysis, an adapted rubric (the original document was that of QMTM, USA) was used to investigate the quality of purposely selected DL materials of those higher institutions, and the status of 19 course materials were discussed in detail (cf. Section 5.4). As the researcher used a mixed methods design, and as each approach has a different line of sight directed toward the same point, a triangulation technique was used to combine the analysis made by the qualitative and quantitative approaches. According to Taherdoost (2022:61), such practices enable the researcher either to cover the demerits of each method with the strengths of the other one or to combine the strengths of the methods with each other.

1.9.4.2 Data interpretation

Categorised as one of the components of data analysis process, Taillie and Donovan (2018:2) described interpretation of data as evaluating and analysing of data in order to communicate it in a meaningful way with the audience selected for the purposes (keeping in mind the purposes

served by the tests used). Accordingly, the researcher interpreted the findings generated by conducting the χ^2 test and independent sample t-test which were used to demonstrate relationships existing between variables and comparisons between the chosen sectors of HEI. Likewise, an interpretation was derived from analysing the modular materials against the criteria established in the adapted rubric. This rubric was used to corroborate the findings identified through the aforementioned assessments.

1.10 ETHICAL CONSIDERATIONS

Research involving human participants must adhere to ethical principles that are intended to promote responsible and reliable research, while eliminating exploitation either of people or of the environment. Ethical principles are meant to safeguard those research participants who do not understand the situation or those who have no knowledge that their information may be used for research (Weinbaum, Landree, Blumenthal, Piquado & Gutierrez, 2019:69).

This research adhered to the steps required by the discipline. Permission was sought from all four HEI to ask them to take part in the study, and all provided their written consent. Similarly, respondents were also requested to indicate their willingness to participate in the study by filling in informed consent forms. It was expressly stated that participation was voluntary, and the questionnaires were also drafted to emphasise that participation was voluntary. This is in line with Laws et al. (2003:239) who explained that getting information from participants is tied up with the process of getting voluntary but formal consent from them. It was also made clear both on the consent forms and questionnaires that the confidentiality and anonymity of respondents were assured to safeguard them from harm and deception. The researcher also applied for ethical clearance from the College of Education at the University of South Africa, and he only started collecting data after receiving the ethical clearance certificate. Moreover, the researcher also informed the respondents that they would be informed of the findings by means of an abridged report and a link that would be shared with them. Finally, as Isreal and Hay (2006:7) portrayed, all data collected either in person or online was protected from third parties to keep participants safe from unnecessary harm, insecurity and loss of integrity.

1.11 DEFINITION OF TERMS

1. Access devices are advance organisers that are used to help learners find their way around a piece of learning. They serve two purposes: to make the structure of the material clear and to help learners understand how they are to use that material (COL, 2005:131).

2. ODL is described as a type of education that uses one or more technologies for the provision of instruction to students who are geographically dispersed and to facilitate regular and substantive interaction between the students and the instructor synchronously or asynchronously (National Centre for Education Statistics, 2019:10).
3. Open and Distance learning (ODL). According to UNESCO (2002:8), the term open and distance learning describes two important points: first, all or most of the teaching is led by someone far away from the learner, and second, the task includes the larger dimensions of openness and flexibility; be it access, curriculum or other elements of structure.
4. Quality is a measure of excellence (Stott, 2022:3).
5. Rubric is an evaluation tool consisting of checklists believed to serve as criteria against which evaluations are made to compare how appropriately or relevantly certain guidelines are constructed to promote the consistent application of learning expectations, learning objectives, or learning standards and to enable us measure whether the objectives are met (Great Schools Partnership, [GSP], 2014:1).
6. Self-Instructional Material (SIM): Constancio, Courasy, Nogueira, da Costa, Zanatta, de Sousa, Gomes and da Motaz (2018:2) state that self-instructional courses consist of intrinsic characteristics that determine the organisation of a series of didactic activities for self-directed study. They stressed that SIM structure consists of provision of the content to be studied and, at the end of each unit, in carrying out tests to make sure whether the learning objectives were met before continuing reading.
7. Service: Saradhamani (2020:6) defines a service as a transaction in which no physical goods are transferred from the seller to the buyer.

1.12 STRUCTURE OF THE THESIS

Chapter 1 highlighted the introduction and rationale for the study, preliminary literature review on quality ODL materials, statement of the problem and research questions. The objectives of the study, research methodology and design used to generate meanings from the data collected were addressed. The significance of the study, and research ethics were also covered in this chapter.

Chapter 2 revolves around the quality and characteristics of learning materials. It first presents the educational system of Ethiopia, a theoretical framework that underpins this study, generations

of DE, the practice of ODL in Africa, paying attention to the pre-independence and post-independence periods. It also discusses how quality learning materials should be developed in open and distance education for effective self-learning services and draws examples from different ODL institutions in Africa.

Chapter 3 reviews international literature on the quality and characteristics of open and distance learning materials. It briefly discusses the practices followed in the United Kingdom (UK), the United States of America (USA) and China in the development of ODL learning management systems and the increases in enrolments. Lastly, it portrays in detail the experiences of IGNOU in India and Unisa in South Africa which apply some of the best practices.

Chapter 4 depicts the research paradigm, research methodology and design and data-collection techniques used. Issues of reliability and validity, trustworthiness, research ethics and delimitation and limitation of the study are discussed.

Chapter 5 presents and discusses the results generated through the qualitative and quantitative approaches.

Chapter 6 provides a summary, findings and conclusions of the study. It also proposes recommendations for development of effective SIM, presents a model for improving the practice related to this in ODL institutions and suggests areas for further research.

1.13 CHAPTER SUMMARY

This chapter provided an orientation for the study and highlighted the introduction and current state of DE in Ethiopia. It stated the research problem and questions, the aim and objectives of the study and a synopsis of the research methodology. It also presented the rationale for the study, a preliminary literature review on the quality of ODL materials, paying attention to the philosophical foundation of DE, the most basic and recent standards against which the quality of ODL course materials can be evaluated, the characteristics of adult learners which dictate guiding rules for the drafting of post-school learning materials and the characteristics that ODL materials should satisfy to be called SIM. The next chapter discusses the quality and characteristics of learning materials, the theoretical framework that anchors the study, traces the generations of DE and how it was practised in Africa, focusing on two historical periods.

CHAPTER 2: QUALITY AND CHARACTERISTICS OF LEARNING MATERIALS USED IN AN OPEN AND DISTANCE LEARNING ENVIRONMENT

2.1 INTRODUCTION

In Chapter 1, the background to the study together with the rationale that motivated the study and the preliminary literature were presented. This was followed by the statement of the problem, research questions, and the aim and objectives of the study. Lastly, the research methodology and methods used, and the ethical issues observed were introduced. This chapter first explores the education system of Ethiopia and traces the history and development of DE in the country and Africa, focusing on two periods: the pre-independence and the post-independence eras. The generations of DE and the theoretical framework underpinning this study are also highlighted. It defines quality, service, and service quality in general, and HEI in particular, and discusses the features of quality of services in the context of higher education.

2.2 THE BACKGROUND OF ETHIOPIAN EDUCATION

The education system of Ethiopia has gone through different periods in line with the country's history. This has impacted its development as the policies were derived from the political systems that controlled state power. Education is not necessarily new to Ethiopia, which is home to an ancient civilisation. Since the advent of Orthodox Christianity in Ethiopia during the fourth century A.D., religious education, including writing as part of its curriculum has been offered by the Church, although to a small population (Seyoum, 2005:19). Accordingly, Ethiopia is the only Sub-Saharan country with an indigenous system of writing. Similarly, Qur'an education has been given by Islamic educational institutions, particularly among the communities inhabiting the eastern and western parts of the country. However, as the teachings of these two religions were not secular, they did not contribute much towards the development of the country (Seyoum, 2005:19).

According to Bahru (2002:23), the introduction of modern education in Ethiopia coincided with the arrival of missionaries, as in many parts of Africa, which saw the provision of modern education as a prerequisite for winning converts. These missionaries were aware of the role of modern education for proselytization and that is why they established mission schools and sent promising Ethiopian students to metropolitan centres abroad (Bahru, 2001:103). The Catholic and Protestant missionaries introduced subjects in formal education as a secondary function of their main goal of disseminating their respective religious doctrines, particularly in the northern parts

of the country (Seyoum, 2005:19). As Ferede and Haile (2015:41) noted, western education enjoyed significant expansion in the country in the post-Adwa period.

Menelik-II, the king of the country at the time, issued the first proclamation in 1906 to meet the demands of the time (Seyoum, 2005:19). The proclamation made pronouncements not just about the benefits of education in general, but also about the usefulness and sensibility of vocational/technical training. The proclamation should have been given recognition for being a pioneer that showed the value of vocational training during the early days of formal education; however, its utility was not recognised in some sections of the country. The emperor was not only satisfied by the proclamation, but he also went beyond words by opening a school for boys and girls. In 1908, the first modern school was opened bearing his name – Menelik-II – to sensitise citizens to the importance of modern education (Pankhurst, 1972:361). The school focused on the teaching of French, English and Arabic languages (Ferede & Haile, 2015:54) as there had been a shortage of translators of these languages when diplomatic relations with other countries began. Emperor Menelik-II had a strong belief that modern education can build Ethiopia as a modern state, and to strengthen the political power (Tamiru & Lasser, 2012:54). For this reason, he sent several students to Europe for education (Pankhurst, 1972:361).

His Majesty, Haile Selassie-I furthered the initiatives of his predecessor, Emperor Menelik-II, by sending several hundred young men and women to study abroad and in 1925, he established the second modern educational institution in the capital named after him, namely, the Tafari Makonnen School, and in 1931, he set up the first school for girls, the Empress Menen School, as well as several other schools in different provinces of the country (Pankhurst, 1972:361). He also set up schools for technicians, teachers' training, orphans, art, boy scouts, besides provincial schools at Dessie, Gore, Jigjiga, Lekempti, Harar, Asba Tafari, and Selale. Hence, in the three decades, prior to the Italian war, there had been significant educational strides which were primarily designed to equip a growing number of Ethiopian government officials with the skills required both to safeguard the country's independence and exercise the crucial tasks of modernization (Pankhurst, 1972:361-362). However, the efforts of the two successive emperors to expand modern education in Ethiopia were interrupted when Italy invaded the country in 1935 (Tamiru & Lasser, 2012:56). During the Italian occupation, the education policy was discriminatory with a strong colonial orientation which restricted education for the Ethiopian nationals only up to the fourth grade while children of the invaders were provided schooling similar to students of their home country (Tamiru & Lasser, 2012:57).

With the repatriation of the Italian invaders, after being defeated at the battle of Adwa in 1940, the country faced a period of transition. Britain played a significant role in assisting Ethiopia to force the Italian invaders out of the country and the regime to regain its power (Seyoum, 2005:20). By the time Italy withdrew, Britain had put its stamp on the education system both in orienting and tilting the syllabus towards its beliefs.

In the 1950s, while Ethiopia was trying to get used to the British education system, the American system was introduced as a result of their involvement in the Ministry of Education (Tamiru & Lasser, 2012:56). This influenced the existing structure and exposed the weaknesses in the country's education system which led to its collapse. From the overview discussed above, it is evident that by 1950, the country's education system had been subjected to three foreign influences of the Italian, British and American education systems.

The influence of Americans on Ethiopian education was observed with the introduction of a new grade structure (6+2+4) into the education policy, which was facilitated by the presence of US-trained staff at the MoE in different positions of expertise (Tamiru & Lasser, 2012:59). This structure meant that a student had to go through six years of primary, two years of junior and four years of senior high school education. Another significant change made during the time of American influence was the promotion of Amharic as a medium of instruction at the primary school level.

During the Derge (Military Junta) regime that took over the feudal system of his Majesty, Haileselassie-I, the education system was reconfigured based on the socialist ideology, which had both positive and negative effects on the country's development (Afework, 2004:65). The socialist education system was designed to create the "new individual", socialised and trained to work towards the common good of the people. However, this period was known for its brutality against those who had thought differently about how the standing problems of the country could be resolved. As a result, many were forced to leave the country and a brain drain set in on a large scale to a point where the overall education system was close to collapse. One good thing that stood out during this period was the socialist attempt to rid the country of illiteracy, an initiative that was acknowledged by UNESCO in the 1990 (Seyoum, 2005:25).

In 2001, the Ethiopian People's Revolutionary Democratic Front (EPRDF) came into power and its education policy gave maximum attention to the massification of education without paying attention to quality. The system opened more than 40 universities throughout the country and fostered technical and vocational education and training (TVET) so that those who failed to access

university education could get training that could enable them to join the middle-level economic class of the country (MoE, 1994:9). According to Tekeste (2006:37), during this period, an all-out effort was made throughout the country to increase the student enrolment at the primary school level. The provision of universal primary education has been going very well in the country; however, according to the most recent World Bank study, Ethiopia has been paying the price for rapid expansion, with a serious decline in the quality of education (Tekeste, 2006:37).

In 2016, a team composed of scholars from different sectors coordinated by the Education Strategy Centre of the Ministry of Education conducted a study on the causes of poor quality of education in Ethiopia, and the country subsequently revised its education policy and launched the Ethiopian Education Development Roadmap (EEDR) in 2020 which is expected to serve until 2030 (MoE, 2018:3). The new document has shown that the quality of the core of the education process, namely teaching and learning, has been negatively affected despite the harmonisation of undergraduate curricula, the introduction of modular teaching, continuous assessment, peer learning and the establishment and operation of quality assurance mechanisms.

The new document has also shown that universities failed to develop strategies and tactics in preparing programmes that require intensive use of ICT for learning purposes such as online education and for academic and research purposes due to poor connectivity and a lack of technical expertise. The EEDR outlines different strategies that can help in the implementation of the proposed education policy. The recommendations have also been proposed to develop a separate policy for each sub-sector in a manner that would ensure coherence at the system level. While addressing recommendations under the sub-heading “Improving access, equity, quality and efficiency” (MoE, 2018:94), different modalities have been mentioned to reach children who are currently out of school. Among the proposed modalities, IT-supported/distance and online systems have been identified as the critical ones. Nevertheless, the methods suggested to provide educational access to children who have been absent from school for various reasons through Open and Distance Learning (ODL) approaches may not be viable. This is primarily due to the well-known fact that the required infrastructure for implementing these methods is not realistically achievable within a short timeframe. The investment needed for such infrastructure is substantial, and furthermore, the ODL system is inherently designed for adults who can effectively manage their time and responsibilities. ODL was planned to shift the Ethiopian School Leaving Certificate Examination from a paper-based system to an online platform for the reasons mentioned above; however, a lack of expertise in the system has thwarted this plan.

2.3 THEORETICAL FRAMEWORK

A theoretical framework, while illuminating the phenomenon of a study and the corresponding assumptions adopted by the researcher, influences researchers on the designing and carrying out of studies and interpretation of data. In relation to educational studies, a theoretical framework helps to describe a phenomenon through a particular lens and challenges and extends the knowledge already in place within the limitations of that lens. It also helps a researcher to reconstruct the research questions, to be knowledgeable in determining the methods to be used for collection and analysis of data and guides how the results of the study are discussed (Luft, Jeong, Idsardi & Gardner, 2022:5).

As discussed below, some of the leading theorists are grouped together based on their conceptual synergies. The first group is made up of theorists that put the learner and their interaction with others at the centre of the education process. Some examples of these are Borje Holmberg, Charles A. Wedemeyer and Michael G. Moore. The second group is those theorists who are primarily concerned with the organisation and the functions of the field such as Desmond Keegan, Otto Peters, Randy Garrison and John Anderson. While these theorists do not lose sight of the centrality of the learner, they concentrate on the structural issues (e.g., industrialisation) and how such issues might affect the process of teaching and learning. This study has adopted Moore's theory of transactional distance and the constructivist theory of learning to form a theoretical framework that will shape and elucidate the current study. The remaining theories for ODL are discussed in Chapter 3.

2.3.1 Moore's Theory of Transactional Distance

According to Moore (1997:22), the theory of transactional distance was the first theory developed when DE was defined as an educational transaction in 1972. In terms of this theory, "DE is not simply a geographic separation of learners and teachers, but, more importantly, is a pedagogical concept. It is a concept describing the universe of teacher-learner relationships that exist when learners and instructors are separated by space and/ or by time" (Moore, 1997:22). He further explained that the separation between the learner and the teacher causes special patterns of behaviours and affects teaching and learning significantly.

Moore posited that there is a psychological and communications space that is intrinsically crossed because of the separation existing between the learner and the teacher and it is a space where a potential misunderstanding between the inputs of the instructor and those comprehended by

the learner could be made. He referred to this as a transactional distance. As Moore (1983: 155) stated: There is now a distance between a learner and a teacher which is not merely geographic, but educational and psychological as well. It is a distance in the relationship of the two partners in the educational enterprise. He calls it transactional distance, the interplay among the environment, the individuals and the patterns of behaviours in a situation.

Based on this premise, Moore (1997:22) highlighted the relativity of the transactional exchange, emphasising structure, dialogue and autonomy as key elements in the communication equation that results. The concept of transactional distance holds significance within a social science framework, as it redefines the notion of distance in education, moving away from its traditional interpretation rooted in the physical sciences (Moore & Anderson, 2003:5). While in social science distance refers to the separation of the participants, in physical science, it connotes the path length of a journey an object covers.

Moore (1997:23) further argued that dialogue is developed by teachers and learners in the course of the interactions experienced by the teacher in giving the instruction, and the learners in responding to the instruction with the purpose of improving the understanding of the student. Though dialogue and interaction seem to convey similar meanings, there is an important distinction between them. A dialogue is purposeful, constructive and valued by each party, and the role played by each member in building the thoughts of others is respected. An interaction can either be negative or neutral while the term 'dialogue' is meant to address positive interactions, with value attached to the cooperative nature of the relationship of the parties involved. This dialogue may take place in a face-to-face situation, individually or in groups, individual or group correspondence or may be mainly one-sided, as in the case of online learning, computer-assisted instruction, programmed instruction, television, radio and text materials (Moore & Anderson, 2003:129). Moore further expounded that when dialogue increases in transactional distance, distance decreases, meaning that the loneliness of the learner is diminished or minimised. The reverse is also true that when dialogue decreases, the transactional distance between the learner and the teacher or the institution increases. This means that if communication gets less attention (interaction is minimised and communication with the teacher or the institution is less), the learner becomes isolated. In more practical terms, Moore explains that if the learner needs more direct instruction, structure and transactional distance increase. If the learner requires more autonomy, transactional distance decreases as dialogue increases and structure decreases (Moore & Anderson, 2003:13).

2.1.1.1 Implications of Moore's theory of transactional distance for ODL

In the above discussion, the concept of self-directed learning (SDL) in ODL has focused on the freedom of the learner to control the goals and activities of the learning process. It is also imperative to consider the opportunities to test personal meaning and reconstruct social knowledge as important aspects of the idea of educational transaction. The challenge for distance educators is, however, to integrate opportunities for dialogue and collaboration into any concept of SDL (Moore & Anderson, 2003:165).

According to Dewey (1959:20), the educational process is a collaborative reconstruction of experience having two sides – one psychological [cognitive] and the other, sociological. He submitted that neither of them can be subordinated to the other or neglected without negative results following. He argued that the psychological or cognitive side of the educational process has been largely neglected in the conceptualisation and adoption of SDL in a DE context. SDL is founded upon the learners' acquisition of a disposition and an ability to learn (i.e., the student has learned to learn). Even though SDL has been largely associated with individual external control issues, education is a transactional experience between the personal world of the learner (meaning-focused) and the shared world of society (knowledge-focused) (Moore & Anderson, 2003:166). Similarly, O'Donnell (1999:257) portrayed that neglecting communities of learning from the learning process will subject dialogic learning simply to a form of normative instrumental action.

According to Garrison (2000:7), in the adult higher education experience, communities of inquiry are found to be the main integral components. In these educational contexts, community is considered essential for higher-order learning and deep understanding as there is an opportunity to question, challenge, diagnose misconceptions and achieve mutual understanding among members of the community. Scholars in the field like Peters and others include reflection in autonomous, self-determined (directed) learning. However, the question is, what can be done to ensure that critical reflection occurs as part of fortuitous, informal learning events. There is a room for creating legitimate educational communities of inquiry at a distance if the theory and practice of the field are transformed (Garrison, 2000:7-8).

Moore and Anderson (2003:166) asserted that there is still much work to be done to fully use SDL in the transactional era of DE. This means that SDL should be extended to its maximum capacity since there is a need for it to contribute to the field of DE. From the theoretical point of view, Moore and Anderson believe that the two defining structures of SDL, autonomy and control are

inadequate by themselves to enable us to employ the concept of SDL in complete terms. Anderson and Moore posited that the twenty-first century DE should address metacognitive and motivational factors for SDL to become a viable and relevant concept in the ODL transaction. It is assumed that a student who is engaged in SDL would learn how to learn and acquire the necessary epistemological and metacognitive knowledge. To put it in more practical terms, we should consider the cognitive development, the metacognitive awareness, and the motivational factors (that keep the learner engaged in their learning) as the necessary conditions for SDL to determine how a learner learns and achieves meaningful and worthwhile results. Every ODL institution should recognise that effective implementation of SDL requires guidelines, which can mainly help the learner and the institution to facilitate reflective thinking and metacognitive processes associated with learning.

The ODL experts explain that the ability of DE to control the external learning tasks through well-designed learning packages must be balanced against the concerns associated with modelling and diagnosing the internal cognitive (i.e., critically reflective) processes leading to higher-order outcomes (learning to learn). In this context, distance educators must consider what it means to be an autonomous and self-directed learner (Anderson & Moore, 2003:167). These authors further stressed that the field of DE must be capable of transforming itself if it is to remain viable, relevant and a leader in accessible continuous learning.

2.3.2 The Constructive Theory of Learning

The constructivist paradigm, drawing on the works of Dewey (1938:8) and Vygotsky (1978:90), among others, focuses on individuals making sense of their lived experiences which emphasise the importance of culture, language and the social environment in learning. This educational philosophy posits that meaning is not imposed or transmitted by direct instruction; rather, it is created (constructed) by the students' learning activities (LA). This perspective diverges from the instructivist (objectivist) view of education that supposes there is an objective reality to learn about and that there are clearly defined objectives to be achieved (Dron & Anderson, 2022:6). The constructivists argue that deep learning can occur only when the learner is actively engaged in, operating upon or mentally processing incoming stimuli. In short, in the constructivist perspective, learning is a process of knowledge construction that depends upon both the epistemic tools (that are believed to establish cognitive operations) and the materials (which are aspects of the existing thinking) manipulated to provide the basis for making sense of new information (Taber, 2019:7).

The epistemic forms (or 'target structures') appear in DL materials in such a way that they can develop self-learning through the provision of learning experiences supported by access devices. Literature on distance and open learning reports that constructivist thought firmly underpins our thinking on the choice and application of the learning environment suitable to the target group of learners believed to be responsible for their learning.

DE, as a learning environment is highly convenient for adult learners, has evolved through five generations as discussed in Section 2.4 and each generation is defined by the levels of technological tools applied in the delivery of education to learners. An analysis shows that in all the generations, the content, or the subject matter that the learner is supposed to master in a course takes much of the concern and the technologies are merely vehicles that deliver instruction. They are what we need to incorporate into the operation to facilitate learning. Manson (2018:266) clarified this notion by referring to the experiences of Unisa in portraying that, to close the gap between the students and their lecturers and the institution, Unisa created a platform called student-on-line (SOL) system (later known as myUnisa) to enable most students to contact their instructors and the university electronically. Manson explained that this strategy has the potential to take the term 'distance' that refers to the geographical separation of the learner from the institution out of 'DL', and that the integration of technologies into ODE increases educational access and equity to a large population. The basic question that should be answered regarding the potential of DE, however, is: How can distance education reach a wide population and cater for the educational interests of the learner?

The promise of open and distance education, catering for the educational needs of the needy can be fulfilled through basic instruments/components: SIM; multimedia instructions; student support services; and two-way communications. Each of these components plays a significant role in the system and their integration enables it to function to its maximum potential.

A careful review of literature and the DE practices shows that the print packages of readings delivered by mail were the mainstay of the first two generations of DE. For Iqbal, Mahmood and Idrees (2019:72), sustained and carefully developed print-based SIM are the backbone of DE and are the source from which all the other delivery systems have evolved. Heydenrych and Prinsloo (2010:9) concurred with Iqbal et al., stating that texts remain the core component of the medium of instruction in all generations of DE. Elen and Clarebout (2001:89) also stressed that in any type of learning platform, the learning environment should be prepared in such a way that it emphasises the learner's activities as a mechanism for learning. Therefore, it is important to evaluate the

learning materials in an ODL approach in terms of the constructivist theory of learning and Moore's transactional distance theory, as they are universal and adaptable to all learning environments delivered via any platforms.

2.4 GENERATIONS OF DISTANCE EDUCATION (HISTORICAL DEVELOPMENT)

The term 'generations' is used to depict different phases of development in DE, or the paradigm shifts that have occurred over time because of its fluidity facilitated by technological advancements. Bates (2005b:5), however, argued that introducing new technologies appears to be at odds with the fundamental concepts of DE, namely openness and distance. While computer-mediated technologies improve access to education for diverse groups, I believe that in many

African countries where the devices are expensive to secure and experts are in short supply, the feasibility of reaching many people in need of education might face a challenge. Heydenrych and Prinsloo (2010:8) supported the view that distance educationalists are faced with two crucial challenges in promoting ODL in the education system: the challenge of creating, capturing, duplicating and delivering content; and facilitating and supporting learning through computer-mediated technologies and connectivity of platforms.

Before discussing in detail each generation of Open and Distance Education (ODE), it is important to trace some steps back to show the origins of DE. From an analysis of the literature on the subject, Biao (2012:30) concluded that the first DE programme, known as "correspondence education", was conceived from within the non-formal education programmes although not all of them qualified as DL programmes. According to him, non-formal education is a system of education within which the rigid safeguards (teacher or institution-controlled timetabling, student discipline, teacher-controlled curriculum, etc.) of formal education are either made flexible or eliminated.

2.4.1 The First Generation of Open and Distance Education (1451–1916 CE)

Literature on ODE associates its history with developments in technologies like the printing press. Bates (2005a:9-10) and Taylor (2001a:2) agree that DE has gone through several stages of development, notably three generations: single-mode (i.e., print or radio), mixed-mode with tuition (an industrial model typified by CD-ROMs, high production values, and telephone tutoring) and social modes (typified by forums and learning management systems). Similarly, Gunawardena and Mclsaac (2003:165-166) traced the history of ODE in terms of ICT, from early print models, radio, television and networked technologies to the present day. Anderson and Dron (2011:6)

considered the generations in terms of the dominant pedagogies of the period. This perspective helps to maintain a focus on the distinctive features that make those technologies educational rather than simple ICT tools and to distinguish them from other uses of similar tools outside an educational context.

A thorough analysis of literature on the generations of ODL shows that the North-Atlantic canon of knowledge dominates the proposals for a 'starting date' of ODL and seriously discounts broader developments in education and human development in a post-colonial critique (Heydenrych & Prinsloo, 2010:11). They depicted that the early achievements of the eras between 40,000 and 32,000 BCE and about 5,000 BCE, when images and symbols were made on the walls of caves and outcropped rock surfaces, and written language and content were produced respectively, they were mostly disregarded in terms of their value to education. Consequently, the efforts that laid the groundwork for later development of correspondence education were not given due attention. In this context, it is necessary to study the ancient East African and Asian experiences as this may bring forth some data to enrich the ancestral roots of the field of ODL.

Guglielmo (1998:36) explained that the integration of communication, teaching and learning in printed materials, all dispatched by mail, is classified as the first generation of DE. The revised definition, however, refers to the development of printing and correspondence as the modes of communication, and the mail system as a delivery option, which has been enhanced through new media and technologies. New technologies, such as the lantern slide and motion picture emerged to provide additional, visually based options to support correspondence study (Heydenrych & Prinsloo, 2010:13).

2.4.2 The Second Generation of Open and Distance Education (1960–1985)

According to Heydenrych and Prinsloo (2010:14), the second generation of ODL brought into the scene new communication technologies that enabled content to be delivered to students anywhere while requiring minimal equipment (radio and then TV). It was also possible to improve the quality of the message (content) with the help of these technologies. According to these writers, no major changes in curriculum development, content ownership or pedagogies were seen in this generation. However, there was a mild improvement in the quality of the content to be delivered using these new technologies.

As can be seen from the first two ODL generations, both used content (texts) and media focused largely on the production of the curriculum, as embodied in the content (learning materials) and

its transmission and delivery to students respectively. This period focused on independent study and the transmission of content, with little (if any) interaction between students and the delivering institution. According to Heydenrych and Prinsloo (2010:15), these two generations had great influence on the development of mega-universities such as the University of South Africa (Unisa) and Open University of the UK (OU-UK) regarding the institutions' organisational and production systems. According to them, the first two generations of ODL were criticised for a lack of changes in curriculum assumptions, or the practices and pedagogies used, and consequently, the communication and interaction challenges remained unsolved.

2.4.3 The Third Generation of Open and Distance Education (1985-1995)

The third generation of ODE is also referred to as Computer-Based DE (CBDE), which marked the beginning of the digital-knowledge age and network society (Bozkurt, 2019:258). Many distance educationalists such as Bozkurt (2019:258) of Anadolu University, Turkey and Heydenrych and Prinsloo (2010:16) of the University of South Africa agree on these descriptions; however, they differ in their views of the learning experiences brought about by using these technologies. While the former argued that the importance of teacher-centred education has been diminished, the latter maintained that two-way communication with and between students remained minimal. Learning was not seen as a social process in which priority is given to teacher-student interaction; hence, the dominant approach was the transmission of content with behaviourist learning objectives in mind.

The authors mentioned above also differ in the models of learning practices in this generation. Bozkut (2019:258) explained that new learning models, such as e-learning, m-learning and omnipresent learning were experienced through effectively developed interactive contents. Learning rather than teaching became the focus, and the idea of lifelong learning took on great importance. Heydenrych and Prinsloo (2010:17), on the other hand, observed that the curriculum and pedagogy had not been changed from that of the previous generations. The curriculum was determined by the institution/lecturer and the pedagogies were still based on the belief that learning happens when content is transmitted to the student and learned. The use of technology did not impact the nature of knowledge produced and transmitted, which means that technologies did not represent efficient two-way communication over a distance. The third generation is categorised as a period when different media were integrated based on multimedia technology and the computer without creating a link among them (Moore & Anderson, 2003:88).

Referring to what is discussed above, it is important to note that the level of ODE should be contextual and reflect the services it provides based on the socio-cultural orientation and development of the country. The fourth generation of ODL discussed below is oriented in a way that seeks to address this issue.

2.4.4 The Fourth Generation of Open and Distance Education (1995-2005)

According to Taylor (1995:3), the emergence of online group communication and the sharing of resources were classified as the fourth generation of DE. He then redefined it in his paper (Taylor, 2001b:3) published on higher education series as a flexible learning model that enabled HEI to create access to interactive multimedia (IMM) online, internet-based access to WWW resources, and computer-mediated communication. In this phase of ODE, it was possible to provide highly refined learning materials with advanced interactive technologies that encourage flexibility in time, place and space. The technologies used in this generation were supposed to facilitate two-way communications between the teacher and the learner who is usually far away from institution. This form of ODE, a more equal distribution of communication between the student and the teacher, and among students was to be provided in a manner that promoted relationships and fostered collective development among learners. This could be achieved through the online learning community. Provision of communication between the learner and the teacher, and among the learners, was stressed by Peters (2010:237) who recognised the need to address teaching with the concept of 'social intercourse'. Holmberg (1989:64) argued that although substantial conversation can be contained in pre-produced courses, continued communication between the student and the teacher is important.

2.4.5 The Fifth Generation of Open and Distance Education (2005 – Present day)

A review of current literature on ODE shows that the fifth generation of DE has been in place since 2005 (Heydenrych & Prinsloo, 2010:20) and it represents the latest online education. It was Taylor (2001:3) who conceptualized a different dimension for the provision of DE when he introduced the intelligent flexible learning model. The model is based on intelligent technologies that record conversations and allow reusability through automated response systems. With the application of these technologies, universities could provide access to their own portals of the processes and resources to their affiliates. This functionality of current technologies makes it possible to reduce the level of interaction with students, meaning scalability and costs are positively affected. Heydenrych and Prinsloo (2010:20) acknowledged that technological advancement has

created a space for the development of new approaches to teaching and learning, but they also argued that emphasising advances only in technology impoverishes our understanding of the development of DE. They also stressed that open-source systems, as well as online and open content reduce the cost of producing materials but raise other challenges like the critical scrutiny of resources and careful integration into scaffolding learning experiences.

According to Zawacki-Richter and Jung (2023:678), with the vast use of online technology, the DE generation continues to be related to connectivism, which assumes that learning occurs within an interrelated network of data and information, best exemplified by the connective massive open online courses (MOOCs) model (cf. 1.3.1).

2.5 ODL IN AFRICAN PRACTICES

Section 2.4 highlighted the generations of ODL and its developments over time. This section discusses how ODL has been experienced in different African countries in relation to the generations mentioned above, and more specifically referring to the history of ODL in Africa, focusing on two periods: the pre-independence and post-independence periods. The pre-independence period refers to the colonial period: 1884–1960 when Africa was partitioned and its resources were shared by Europeans (Biao, 2012:33-34) while the post-independence period refers to the time when many African countries became decolonised after intensive fights for freedom. The experiences of some European, Western and Asian countries that are forerunners in establishing the system are discussed in Chapter 3.

2.5.1 Open and Distance Education During the Pre-independence Period

Before the University of South Africa (Unisa) was given a new role as the first and foremost ODL institution in Africa in 1946, a few Africans were studying overseas through correspondence colleges (Biao, 2012:34). The approach involved receiving course packages and assignments and returning worked assignments through the post (Light, 1999:1). Unisa was founded in 1873 as the University of the Cape of Good Hope and spent most of its early history as an examining agency for Oxford and Cambridge universities and an incubator of most other emerging universities in South Africa (Biao, 2012:34).

Unisa is generally considered a leader of ODL in Africa and currently offering study opportunities close to 400 000 students across South Africa, Africa and other parts of the world (Unisa, 2019:1). Section 3.4 discusses the historical development of Unisa, and as literature shows, the techniques of ODL that are being used by a growing number of HEI in some regions in the east, west and

centre of Sub-Saharan Africa after realising that it provides a more flexible education system for students.

2.5.2 Open and Distance Education during the Post-Independence Period

In the 1980s, the world was struck by the economic meltdown crisis, which scuttled the ambitious project of developing enviable formal school systems in various African countries (World Bank, 1988:33-34). During this period, Africa had started experiencing both significant unemployment problems and job losses and one of the strategies used by employers to mitigate this was to set aside time for studies during which employees in certain sections of enterprises or government organisations were directed to obtain relevant higher qualifications. The well-known experience that tried to realise the strategy was provision of adult remedial education, in the evenings and weekends that aimed at helping adult learners acquire knowledge and skills and enabling them to receive certificates and diplomas which they could not obtain through the formal school system (Biao, 1992:45-46). Biao further explained that such training started almost simultaneously in major cities of Africa with the intention of reaching those with secondary school level programmes to prepare them for tertiary education. It seemed encouraging that employees should acquire training that would enable them join HEI; however, their opportunities to join African universities were very limited (between 6% and 7%) as regular high school graduates were also queuing for admission (Tilak, 2009:16). Leave alone the post-independence period, even today, in most African universities, there is not enough space to accommodate qualified candidates because of shortage of facilities and limited placements in their premises. As a result, many qualified candidates opted for alternative HE modes including ODL to satisfy their quest for learning. The fear of job loss, personal ambition, search for skilled manpower in the implementation of complex regional developmental agendas and globalisation are some of the factors that fueled the expansion of the ODL sector (Biao, 2012:40) in the post-independence period.

The current status of the tertiary education enrollment by region (% gross) in Sub-Saharan Africa, as shown in the Appendix-M, supports the discussion made above that addresses the need for ODL as an alternative mode of learning. According to the Institute of Statistics, UNESCO (2020:1), across the continent, approximately 9 million students are enrolled in the tertiary education sector, which is 3% of all student enrollments in the region, that is, over 260 million students enrolled in Sub-Saharan Africa across primary, secondary, and tertiary levels (Appendix K), and 4% of total tertiary education students enrolled globally (UNESCO-Institute of Statistics data, 2020:1).

2.6 DISTANCE EDUCATION IN ETHIOPIA

Different sources identify different timelines for DE in Ethiopia though almost all converge on the form it appeared in. In terms of acknowledging the historical background in the 1960s, the joint work of the Ministry of Education Basic Education System Overhaul (BESO, 1999:8) asserted that DE in Ethiopia emerged in the form of continuing education at Addis Ababa University (AAU). Gradually, the Ministry of Education took over the responsibility from AAU and transferred it to the Department of Curriculum, which was later transformed into the Department of Adult Education (BESO, 1999:8-9). In the same vein, the Ministry of Education authorised the EEMA in 1987 to run the system of DE, and specifically, to coordinate teacher education at tertiary level, with specific reference to the diploma programme. However, Ejigu (2002:3) noted that EEMA has been coordinating distance programmes at the secondary level since 1971, though it could reach relatively few people – around 1 000 students in 2001–2002. After a series of efforts made by the Ministry of Education, the DE panel was organised into a semi-autonomous institution and renamed the EMA with the responsibility of providing DE at the secondary level (Ejigu, 2002:3). According to Afework (2004:27), the intention of providing DE in the late 1960s was to reach those who were denied educational opportunities in conventional schools. Yalew (2004:131) traced the introduction of DE in Ethiopia to the 1940s when it was used to upgrade the level of primary school teachers without taking them out of their workplaces. Referring to literature collected by Sekar and Nigussie (2020:28), the distance mode of education in Ethiopia started around 1962–1964 at the DE division of AAU. During this time, some staff members were invited by the Extension Division of Nebraska University, USA to receive training and support in designing DE courses. However, that plan did not succeed as the courses designed for the programme did not address the interests of the Ethiopian learners as they were simply packages of imported American contexts (Getachew, 2003:5).

A significant systematic approach to managing DE at a higher level of education was initiated by AAU in collaboration with BESO (United States Aid for International Development [USAID]) to provide the first postgraduate distance education programme in 1998 with two master's programmes in education, one in educational management and administration and the other in curriculum development studies (Sekar & Nigussie, 2020:29).

The new Ethiopian Education and Training Policy (ETP) designed in 1994 by MoE endeavoured to satisfy the country's need for skilled manpower by providing training in various skills and at different levels. It encouraged the development of nearly 12 DE programmes shortly after its

announcement. Even though the MoE (1994:9) indicated that conventional education programmes alone could not solve the problems of the country due to insufficient educational resources and skilled manpower to carry out tasks in different economic sectors, it did not describe a policy and the strategy for integrating DE into the education system.

It is important to discuss the involvement of EMA in DE as its contribution is significant in providing access to education to many adults. EMA has been providing courses through different instructional modalities, mostly print materials which were produced centrally, and educational radio programmes produced at EMA's central studio and broadcast all over the country (Ejigu, 2002:3-4). According to Ejigu, face-to-face tutorial programmes were also conducted twice a year at selected tutorial centres to augment those delivered with print and electronic media. Ejigu further explained that EMA was also responsible for the development of instructional materials, material reproduction and distribution, processing grade reports, managing technical services ranging from registration to counselling, giving face-to-face programmes, conducting examinations and marking and grading students' work. It has also been responsible for training CW and editors.

Tilson and Kelemu (2003:20-21) argued that though the MoE authorised EMA in 1976 until 1978, it could not deliver more than six courses through the DE mode. Afework (2004:28), however, noted that it widened the concept of DE from primary to secondary education and achieved several educational goals. As a result, the number of participants increased during the period 1979–2001 to over 13 426, and many of these learners were found in various regions of the country. Afework further stated that in 2001, DE started providing access to learning to 21 000 primary school teachers to upgrade them to the diploma level. According to Tsegaye (2014:23), EMA's responsibility of delivering DE at the secondary school level is almost dying out partly because the government has given a chance to the new private educational institutions to participate in the system.

Currently, DE is offered through several public and private colleges and universities in the country. As with the previous versions, this approach is intended to supplement the conventional school system to develop the capacities of employees while working at the same time. There are also joint ventures such as St. Mary's University in Ethiopia and IGNOU in India, Addis Ababa Commercial College and UK Open University running DE at a second-degree level. A unique HEI offering different programmes from bachelor's degrees up to PhD level in Ethiopia is Unisa, which started its operations with the opening of a regional centre in 2007 (Manson, 2018:268).

2.7 LEARNING MATERIALS IN OPEN AND DISTANCE EDUCATION

According to Gujjar and Malik (2007:55), ODL is an institutional concept of education centred on SDL, using correspondence courses with an integrated element of communication technology and facilitated by means of tutorial sessions, seminars, and other related platforms to meet the need for more human resources and professional skills that the job market requires. The ODL system provides alternative ways of gaining established qualifications (Gujjar & Malik, 2007:55). The content of such courses cannot depart from the requirements of a subject. The difference in the learning experience arises from the presentation of course materials and students' circumstances, and therefore, different pedagogical skills are required. The term instructional material refers to the tools used in educational lessons comprising of active learning and assessment (Janovsky, 2022:1). In general terms, any resource a teacher uses to enable their students learn is an instructional material.

From my long years of experience in teaching at high schools and universities, I can assert that teaching in a classroom enables a teacher or an instructor to guess whether they are on the right track by having a look at students' facial expressions and attentiveness. This means that face-to-face interactions with students allow the teacher to see how they present lessons and check whether students are following the lectures or are bored. Evaluating a teaching-learning approach enables the teacher to review their teaching strategy. In an ODL scenario, there are possibilities for changes during the courses. However, this model is quite expensive, time-consuming, passive and difficult to implement (Lockwood, 1994:18).

From my experience of providing training on ODL material development to staff in HEI, I noted that the production of ODL materials involves a large investment at the design stage. This implies that by the time self-learning materials come to be presented, they should be stimulating and pedagogically sound to suit the target students. ODL materials are collaboratively crafted by a diverse team with various areas of expertise. Their task is to develop and create a course that guides learners with limited subject knowledge towards a level of competence that enables them to effectively engage in studies at a recognised qualification level. As mentioned earlier, before designing a given course for an ODL setup, researchers routinely question whether the following points are addressed in advance of becoming engaged in ODL material development (Lockwood, 1994:55):

1. In what order should the courses (and the topics/chapters within them) be presented to learners?

2. What factors could influence the course writers' thinking?
3. What criteria would course writers use to make decisions?

In an ODL setup, course designers, evaluators and researchers pay considerable attention to the teaching of specific topics, teaching techniques and general approaches to instruction. However, issues such as the organisation and structure of a course, and the presentation of its content and subject matter receive much less attention. Within an ODL system, where prepackaged courses are designed for students to study independently without direct physical interaction with instructors, meticulous attention must be given during the production phase. This is essential as altering the materials incurs significant costs and places students, particularly those with limited educational backgrounds, at risk of adhering rigidly to what they perceive as the designated "authority route" through the material (Lockwood, 1994:56).

Lockwood (1994:56) proposed that in the planning stage of a course design for the ODL system, course teams should address the following questions:

1. To what extent is the course structure determined by the nature of the subject matter?
2. How (i.e., in what order) will students study the course?
3. What will the functions of the different elements and media be?
4. How will the structure and material of the course be affected by the way it is made?

According to Lockwood, the nature of the content of a course determines its structure, and there should be a clear order in which topics should be presented. This assumption may hold for some discipline areas such as mathematics, technology and science as they contain clearly hierarchical elements. For example, in the General Physics-I course, it is a prerequisite to learn about motion and velocity before getting into the concepts of momentum and acceleration. However, in the realm of humanities and social sciences, the subject matter in the majority of subjects is seldom presented in a linear or hierarchical fashion. Instead, it embodies a self-contained unit.

From my experience in preparing DL modular materials for physics courses, course content was written in units which were then assembled specifically for an individual course. I was also expected to combine ideas and concepts in novel patterns and develop a plan to present the lessons in innovative ways. The question I kept asking myself, however, was whether the result of learning of students using the modular materials become obvious and inevitable in the way the

course is structured. I witnessed here that though the learning materials were made manageable and consisted of coherent concepts, most students did not find them engaging and easy to understand (Tessema, 2004:109).

Concerning the question as to how students study a course, the assumption in any educational setting is that they study in ways that their teachers set out for them. This is, however, misleading because in an ODL setting, students largely study on their own. In an ODL context, students are flexible on how and where to study and are free to choose the order of their study. This contrasts with face-to-face situations where lecture and seminar timetables exert considerable influence on how students study. Lockwood (1994:58), however, emphasised that the key element that determines learning is the state of existing knowledge, a lack of it or erroneous knowledge that the student already has. This requires an educational expert to design a learning strategy that builds on what is already available, filling the gap identified and correcting students' misperceptions and understandings. I agree with Lockwood's assertion as it goes in parallel to my extensive experience in teaching at both high schools and universities. I acknowledge that the teaching-learning process primarily focuses on delivering new knowledge and skills, often neglecting to consider or intentionally address students' existing cognitive understandings, whether accurate or mistaken. Additionally, there is often a lack of planning to address the gaps that students might have, which could be mitigated through remedial classes. Hence, taking care of such experiences in educational planning is worth mentioning.

The order in which content is presented in the course, the nature and purpose of teaching elements and the media which is used to present the subject matter of the course need maximum attention. This is significant for the ODL course developers as it directs them to follow the standard model in which the teaching texts/units are complemented by a range of other media (television, audiocassettes, computers, set books, especially prepared readers, home-experiment kits, the tutorial support through assignments and tutorials, residential schools, etc.) (Peters, 2010:174). Whatever forms of media are incorporated into the system, the main teaching element remains the teaching text/unit, which is self-instructional in nature, and students are guided in their study of the other media by the main teaching texts. However, the basic issue is whether the teaching texts serve the purpose of telling, teaching or both.

According to Lockwood (1994:57), the teaching texts are concerned with telling by providing information about the basic subject matter of the course. He further suggested that texts are also made to serve the purpose of teaching. In teaching they are supposed to provide students with

opportunities to develop a deeper understanding of the subject matter, to gain expertise, to practise appropriate skills and apply what they have learned in different ways. He acknowledged that attempting to combine the two functions can be an uneasy compromise as it seems that the purpose of a particular section or unit may be unclear to students while the course/unit authors believe that it is clearly stated. Lockwood asserted that the main purpose of teaching is the conveying of information by the instructor and its absorption by the student.

Another crucial issue that needs to be addressed is to revise the draft teaching materials before they are sent to the production centre. The first drafts may be in an erratic order and require revisiting. This may be due to work commitments to other courses, or a lack of resources. Different reasons may account for this; however, the results can be negative if materials required later in the course do not appear, or themes identified as central to the course in earlier materials receive scant attention later. Inevitably, a more subtle lack of continuity is a real danger when materials are produced in a random order. Lockwood (1994:61) summarised this idea by depicting that the whole course or a unit should be checked for cumulative coherence on an iterative basis before handing it over for printing or production. Thus, it is important for ODL experts to pay attention to how the overall structure of courses for ODL learners should be organised and presented.

Learning is essentially an individual activity in the sense that to learn something effectively, the learner must internalise the knowledge, attitudes or skills. In a DL situation, the primary information channel is SIM. Distance students are guided on study methods, how to plan their study time and work out strategies for effective studying, how to develop study skills while learning from reading, and viewing group discussions and practical work.

ODL researchers maintain that any mode that fits the conditions of any country may be adopted or adapted (Ramanujam, 1995:18-19). He further stressed that a country should give due attention to the establishment of an internal faculty, which consists of “policy makers and planners, administrators, researchers, curriculum designers, writers/reviewers, editors, course coordinators, tutors/counsellors, and evaluators” (Ramanujam, 1995:158). Although there are aids to writing self-learning materials, and training can be provided to enhance skills, authorship remains a highly personal trait. In theory, it seems that the person best suited to write the package would be one with a firm understanding of the subject matter, as he would not need to research the topic deeply (Lockwood, 1994:123-124). However, instructional designers suggest that excluding exceptional circumstances, the subject matter expert is the last person to write it. It should be noted, however, that subject matter experts mostly fail in three ways (Gujjar & Malik,

2007:62): Initially, they appear to shape the entire course content in a manner akin to areas in which they have substantial expertise and enthusiasm. However, this approach can be detrimental to the overall material, potentially overlooking critical aspects that each area necessitates. Furthermore, subject matter experts should endeavour to adopt the perspective of the learners, putting themselves in the learners' position. Failing to do so goes beyond merely overestimating the learners' foundational knowledge. Third, as they are mostly engaged in designing subject matter, they seem to have no experience in visualisation and produce scripts that are virtually impossible to illustrate.

Most ODL institutions use print as the major learning material and other forms such as radio schools, educational television, telephone teaching, audio and video teleconferences and computer-mediated communication to support it (Gujjar & Malik, 2007:56). They further discussed that the stimulus that print materials offer for learning depends primarily on the teaching skills that it incorporates and on the sense of progressive mastery of the subject which the student derives from it. Moreover, the printed material defines the nucleus around which an integrated sequence of broadcast programmes, directed activities, discussion groups and face-to-face teaching can be delivered. Most distance educationalists believe that the package of printed material dispatched to students at regular intervals is an indispensable component of ODL systems. However, with the

advent of the internet in the late twentieth century and the growth of learning management systems (LMS), DE shifted to online education. The implementation of the LMS as a vehicle for teaching, learning and assessment has made it possible for ODL to get a new meaning and values. The adoption of LMS facilitates the provision of a more efficient and effective means to disseminate [self-instructional] materials (e-print & e-modular materials in the form of pdf files, and PPT) to a wider audience (Amrane-Cooper et al., 2023:168).

Writers who develop SIM must be deductive, critical and creative thinkers, and have good visual creativity and compassion for their learners (Gujjar & Malik, 2007:62). These authors further argued that both the academic content of the course and the way it is taught to students should be designed ahead of the actual activity as a single operation by a simple group of people. They stressed that for learners to comprehend the required teaching points, the writers should ensure that the text is appropriate and logically arranged and ties up the illustrations with the text so that learners can follow meaningfully.

As a general practice, in almost all the ODL materials, the training courses are organised according to the units prepared by the course team. From the curriculum point of view, the task of the course team is to set teaching in operation, keeping in mind the potential of different media by using a system approach with the learner as the key figure. Curriculum designers recommend the following Dick, Dick and Carey's (2005:9) systems approach to teaching whether in an ODL or face-to-face environment, namely: identifying instructional goals; conducting instructional analysis; analysing learners and context; writing performance objectives; developing assessment instruments; developing an instructional strategy; developing and selecting instructional materials; and designing and conducting formative and summative evaluations (D'Angelo, Bunch & Thoron, 2018:2-3).

Once a systems approach has been developed, and members of the team of course writers agree to adopt a single style, their attention should be focused on how to keep isolated students interested in their courses and working on them (Mays, 1998:7). According to Mays, this can be done by writing courses in such a way that students are engaged in activities which go beyond formal book-learning and gradually become more open and critical in their approach to the subject matter.

Self-learning materials should satisfy the following four areas, which are important in making of SIM useful:

1. be made up of appropriate content (covering the core material in-depth and leave interesting leads for the more inspired learner to pursue on their own).
2. be written in accessible language (use simple straightforward language that would help the learner understand the course content).
3. have sound ODL practice (should be comprehensive, accessible and supportive to establish a suitable learning environment).
4. have a stimulating layout to help learners find their way around learning materials whether in print or on the web (the learning materials developed for ODL learner need to say, "Use Me" and never create "Take it or Leave it" impression) (Mays, 1998:8-9).

So far, the discussion has centred on how course writing is organised, the ways courses are structured, the importance of following the systems approach, acknowledging the characteristics of learners (target group) and the aspects that are important in developing the SIM. Once the draft

study material has been developed, the whole course or unit should be rechecked for cumulative coherence on an iterative basis and revised before handing it over for printing/production. This can be done either by a sub-group of a team of CW or by an external agent with the relevant experience on the operation. This explains the fact that textual materials need editing, which should include the following aspects (COL, 2005:229-231):

1. Technical review, to ensure that the content is technically correct.
2. An educational technology review, to ensure that the sequence and structure are likely to enable students to learn.
3. Elimination of ambiguities, repetition, errors of grammar and spelling, and checking that cross-references are correct.
4. Rewriting long sentences. Long lines are said by some researchers to be difficult to read and researchers generally recommend around 10–13 words per line. One recent study supported the need for writing short line lengths for adult learners as longer line lengths require greater lateral eye movements, which makes it more likely to lose one's place within the text (Bernard, Fernandez, Hull & Chaparro, 2003:1375).
5. Adjusting the balance and coherence of course coverage; and
6. If several authors are involved, coordinating their efforts to a single style.

2.7.1 Learning Materials in African ODL Universities

The previous sections discussed how ODL has been practised in Africa, categorising the nations into pre-colonial and post-colonial eras. The driving forces for the establishment of the system of ODL around the same time in major cities across Africa were also mentioned. This was mainly driven by the growing demand for HE, low admission rates in African universities due to limited places available in their premises (Biao, 2012:35), the fear of job loss, personal ambition, the search for skilled manpower needed for the implementation of complex regional developmental programmes and globalisation, to mention a few (Biao, 1992:46; World Bank, 1988:58-59). ODL originated as correspondence education from non-formal education programmes and passed through successive phases using technology and resources that facilitate the way in which teaching and learning practices are delivered to the target groups, differing from one generation to another.

In each generation, text materials have played an important and significant role as the stimulus for learning. This means that print materials that are offered depend primarily on the teaching skills that they incorporate and the students' progressive mastery of the subjects. Currently, changes have been registered regarding the platform being used in ODL because of the urgency created by COVID-19. Nonetheless, most African Universities are facing difficulties in the use of e-Learning platforms because of an excess number of students, poor infrastructural development and poor access to the internet off-campus (Ntshwarang, Malinga & Losike-Sedimo, 2021:142).

The status quo regarding the provision of ODL in some African countries is summarised in Table 2.1 below.

Table 2.1: Learning materials used in ODL by African countries.

N°	African country	Learning materials used in ODL	Source
1.	Algeria	Print, radio, television	https://www.etf.europa.eu/
2.	Botswana	Print, e-learning, WebCT, interactive Blackboard, virtual	http://creativecommons.org/licenses/by-sa/3.0
3.	Egypt	Print, face-to-face tutorial, radio, television videoconferencing	https://unesdoc.unesco.org/ark:/48223/pf0000123157
4.	Ghana	Print, face-to-face interaction, videoconferencing, online	https://files.eric.ed.gov/fulltext/ED524807.pdf
5.	Kenya	Print, face-to-face interaction, telephone, videoconferencing	DOI: 10.19173/irrodl.v13i3.1120
6.	Lesotho	Print, face-to-face interaction	https://oasis.col.org/handle/11599/234
7.	Morocco	Print, face-to-face interaction, online	https://doi.org/10.1016/j.ssaho.2022.100253
8.	Namibia	Print, face-to-face tutorial, audio, audio-vision, videoconferencing and telephone	https://www.yumpu.com/en/document/view/49678551/university-of-namibia-centre-for-external-studies-

9.	Nigeria	Print, radio, TV, mobile learning (using cell phones)	https://www.researchgate.net/publication/26415979
10.	South Africa	Print, face-to-face, Technologies with limited interaction (CDs, DVDs, satellite broadcasting, online via myLife, myUnisa), Multimedia with interactive possibilities	https://www.unisa.ac.za/institutes/documents/odl-policy_version5_16Sept08.pdf
11.	Eswatini	Print, face-to-face interaction, Online through LMS	http://www.ide.uneswa.ac.sz/
12.	Tanzania	Print, face-to-face interaction, online, blended	https://www.tcu.go.tz/sites/default/files/Handbook
13.	Uganda	Print, face-to-face interaction, audio & videotapes, minimum ICT	file:///C:/Users/user/Downloads/DISTANCEEDUCATIONINUGANDA.pdf
14.	Zimbabwe	Print, face-to-face tutorial, myVista e-learning portal	http://colfinder.net/materials/Supporting_Distance_Education_Through_Policy_Development/resources/worldbank/countries/zimbabwe/zimoverview.htm

2.7.2 Learning Materials in Ethiopian Universities Providing ODL

In Section 2.6, it was highlighted that ODL has been adopted by some government and private higher institutions using print materials with a few exceptions of private institutions which have started to use an e-learning platform necessitated by the restrictions imposed by the government during COVID-19. This shows that the provision of DE in the country has not moved very far from the first-generation mode characterised by correspondence education, with some face-to-face contact for tutorial purposes.

Some highlight given in Section 2.6 about the studies conducted on DE in Ethiopia show that some components of the system have not been effectively managed; hence, its provision is inefficient. According to Mulatu (2014:140), the support services that the system outlines to improve learning and success of distance learners at private higher institutions have proved to be ineffective. In a study that scrutinised the modular physics course learning materials prepared for Project 17000, Tessema (2004:90) found that the course lacked the necessary attributes a DL

material is required to consist of. Similarly, Sakar (2020:29) explained that EMA used print, video, and face-to-face tutorials to deliver instruction to its learners only for a short period of time and the operation had not been effectively managed.

2.8 QUALITY

2.8.1 Definition and Understanding of Quality in Higher Level of Learning

It is generally accepted that competitiveness is the hallmark of a knowledge market economy. In responding to this reality, quality education and training programmes have been at the centre of the national education agenda of many countries. Quality and productivity are stressed everywhere in the world and a focus on quality improvement is only achieved through better systems of cooperation and partnerships with quality enhancement organisations, research institutions, universities, government and private organisations (UNESCO, 2013:13).

According to Gupta (2021:56), the word 'quality' comes from the Latin word *qualis* and seeks to ask the question, 'what kind of' and has different interpretations and connotations. Different countries have devised a range of mechanisms to ensure the quality of products and services in various sectors, which involves establishing responsible agencies. In the USA, for example, the American Society for Quality (ASQ) is known for its passion as a voice for quality (ASQ, 2007:1). As a professional association, it mainly focuses on boosting learning, quality improvement and knowledge exchange to improve results, and supports the creation of better work environments and societies across the world. While it advocates quality movement, ASQ also offers technologies, management skills, tools and training to scale up the quality of professionals (ASQ, 2007:7).

It is quite difficult to define quality in terms that satisfy all the dimensions and fit in all contexts. There are those who find it hard to define or quantify while some assert that it lacks objectivity and depends on the understanding of an individual. As Schindler, Puls-Elvidge, Welzant and Crawford (2015:4) posited, it is difficult to come to a consensus regarding the definition of quality as there is a wide range of interpretations given to it based on the views of the stakeholders taking part in different phases of a programme. They further stressed that a definition given to quality should address four groups of stakeholders: providers (e.g., funding bodies, community and taxpayers); users of products (e.g., students); users of outputs (e.g., employers); and employees of the sector (e.g., academics and administrators) noting that each group of stakeholders has a different perspective on the dimension of quality. Students link quality with the process of

education they are engaged in and the smartness of their learning experience while employers relate it to the outputs, the employability of graduates (Dicker, Garcia, Kelly & Mulrooney, 2018:8-9). To address these differences, it is important that all stakeholders should be involved in the discussion to ensure that different perspectives and needs are incorporated to reach a common understanding of quality and establish a strong culture of quality in HE (Cullen, Joyce, Hassal & Broadbent, 2003:10).

In the context of HE, though literature indicates that there is still no consensus on the definition of quality, there are, however, themes on how it is conceptualised and assessed (Schindler et al., 2015:8). These include four dimensions in which quality is conceptualised in a broad sense: quality as purposeful, transformative, exceptional, and accountable and a set of quality indicators should be used to assess each of the broad conceptualisations. As Schindler et al. (2015:6) proposed, defining quality adequately requires both broad and specific strategies. The broad strategies are meant to target central goals and outcomes while the specific ones are supposed to identify quality indicators that can be used to assess whether the identified goals and outcomes have been achieved.

Figure 2.1 is a conceptual model of quality developed by Schindler et al. (2015:7), which illustrates the relationships between the strategies mentioned above.



Figure 2.1: Conceptual model of quality depicting broad and specific strategies for defining quality

Source (Schindler et al., 2015:7)

The core of the model depicts the importance of eliciting the perspectives of stakeholders, which are the driving forces for the definition of quality and the indicators used to measure it (Eskerod, 2020:1). The second segment of the model carries four of the broad conceptualisations of quality referred to as dimensions above. The last outer portion of the model portrays examples of indicators that could be used to assess each of the conceptualisations of quality. In general, the model reflects the importance of using multifaceted approaches to adequately define the quality of a service like education.

2.8.2 Quality in Teaching and Learning in Open Distance Universities.

The purpose of teaching is learning, and the quality of teaching provided by educational institutions should be relevant to the aim of promoting learning. As Hénard and Roseveare (2012:7) explained, quality teaching takes place at three interconnected levels:

1. at the educational institution level, which includes work plans for designing the institution's policy strategy on quality, supporting internal and external evaluation systems;
2. at the curriculum level, which includes actions aimed at evaluating and improving the design, content and application of the curriculum; and
3. at an individual level, which includes initiatives that help tutors achieve their goal, encouraging them to innovate, support and improve student learning, and adopt a student-centred approach to learning.

In general, quality teaching in higher institutions requires using pedagogical techniques to generate learning outcomes in students' learning and is designed to create conditions that encourage the development of learners' skills such as critical and creative thinking (Hénard & Roseveare, 2012:7,15). And when it comes to ODL, according to COL (2019: 7-18), the following attributes require special attention for quality is to be assured by the provision:

1. The programme design: should be done in such a way that course outcomes, objectives, activities and assessments should be well-aligned.
2. Provision of support systems: an ODL system needs to have a precise profile of learners to decide on the appropriate support for the different learners, and the teaching should provide timely feedback on assignments to learners to enhance effective learning.
3. Material development: ODL material is the core aspect of quality in quality assuring mechanisms. There should be proof that academics in ODL are trained in instructional materials design for print and online delivery. If active and deep learning of learners is to be promoted through engagement, learning materials should be developed based on sound instructional design principles.
4. Assessment of learning: it is mandatory to establish a valid and effective assessment strategy which manifests the inclusion of a variety of assessment approaches to make the assessment rigorous and authentic.

5. Infrastructure and facilities: it is necessary that appropriate technological innovations are applied in the learning transactions so that the learning experiences of students can be enriched. Similarly, using appropriate technology facilitates the institutional provision of support to students and conducting examinations and recording students' results is more efficient than manual capturing of such results.
6. Regarding staffing, the institution should comprise of relevant staff with appropriate qualifications that are required for an open, flexible and distance mode of delivery. Similarly technical and support staff should be adequately qualified for the job they are doing.
7. Referring to the overall systems and structures, it is mandatory that the system considers the peculiarities of ODL and the needs of the learners. This means that policies and processes are in place to ensure the quality of learning materials and quality assessments (assignments, quizzes, examinations); and in protecting students' grades, in handling students' queries/appeals.

As Xanthopoulou and Kefis (2018:73) noted, research and scientific publications on quality in teaching and learning, particularly on ODE are limited. Research on open universities around the world reveals the absence of a quality model that fits in every context since there are different needs and conditions though the existing schemes and models for quality assurance are designed to offer flexibility for institutions to suit national and institutional contexts (Ossiannilsson, Williams, Camilleri & Brown, 2015:40). They further highlighted critical aspects that an international organisation like the International Council for Open and Distance Education (ICDE) should take care of to address the issue of quality in ODL, namely, provision of a register of good-quality systems, and a guide to action towards securing quality work; addressing common issues around training, best practice sharing, localisation; and ensuring a harmonised regulatory environment to mention a few.

2.9 QUALITY OF A SERVICE

2.9.1 Quality of Service Provision

This section discusses the characteristics of service provision in general and features of quality services in HEI. However, it is appropriate to describe the quality-of-service provision and some common types of service qualities before discussing the two sub-topics.

Service quality, according to Serra, Surujlal and Redda (2016:172), is the difference between the expected service and the actual service received. According to Parasuraman, Zeithaml and Berry (1988:15), it is seen as a kind of attitude, similar but identical to satisfaction and is the result of the comparison made between what is expected and that actually perceived as performance. It is the value of service to customers, which has an inherent subjective nature if it is driven by the needs, expectations and perceptions of customers (Spacey, 2016:1). According to Gul, Jan and Shah (2019:217), within the realm of higher education (HE), students associate service quality with their desire for superior education and exceptional support in their learning environment. This encompasses aspects that fulfill their needs and enhance their capacities, fostering the development of a well-rounded educational persona. Ossiannilsson et al. (2015:23) recommended strengthening this stance that students as customers of HE should take part in co-definition of service quality, giving emphasis to the saying “quality is in the eye of the beholder”, meaning that their views may not necessarily be the same as other stakeholders.

The discussion below highlights five of service dimensions that all customers care about for quality services:

1. **Reliability:** an organisation or an institution should be dependable on the services it provides to its customers. In the education sector, Ayodele (2014:150) explained that the reliability dimension of service quality refers to the extent to which the correct, truthful and latest knowledge and information fulfil and perform the services promised to learners.
2. **Responsiveness:** according to Ayodele (2014:150), service providers should be responsive to the individual needs of their customers. An example is that of a firm that is not locked into rigid policies when a special situation arises. According to Ayodele, responsiveness in education involves the compliance of the school and staff to provide prompt and favourable services to students.
3. **Empathy and tailoring:** it is well known in the service industry that different customers prefer different styles of service. For example, some customers enjoy a personal conversation whereas others would prefer to maintain a distance. In the education sector, empathy plays a crucial and influential role in satisfaction. In the views of Ilias, Hassan, Rahman and Razak (2009:169), empathy is “being able to communicate care and understanding through the interpersonal skills of the staff and student-friendly policies and procedures.” O’Neill and Palmer (2004:49) described empathy as a dimension that has a significant effect on the satisfaction of

students. Relying on his findings, Maushart (2003:494) explained that when students show high satisfaction with their college experience, it is due to formal and informal contact with their lecturer. Maushart (2003:494) further elaborated that the interaction of students with their lecturers and staff exposes them to the processes of teaching, learning and inquiring, which are central part of students' evaluation of service quality.

The following dimensions were garnered from Spacey (2016:1):

1. Competence and diligence: this is related to professionals who know what they are doing and to what they pay maximum attention. In the education arena, competence refers to the ability of the instructors to deliver the information to the best of their knowledge.
2. Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence.
3. Tangibles: appearance of physical facilities, equipment, personnel, and communication materials.

2.9.2 Features of Quality of Services in Higher Learning

Hénard and Roseveare (2012:21) posited that the provisions of HEI are purely services and require active engagement of students. Their effectiveness is evaluated based on students' feedback, which indicates and influences the quality of teaching. The feedback from customers (students) should involve both dialogue and sharing of information on the students' experiences. This is because students are beneficiaries of quality teaching and can provide information not only on what works well but also on what they want to be done differently and how. According to Zeliha, Sefer, Senem and Senem (2017:2056), while students are both stakeholders and customers of HEI and customer satisfaction is strongly attached to service quality, HEI are obliged to ascertain their needs and demands coupled with their customers' interests.

Most international students finance their own tuition fees for the services they obtain at HEI, which forces the latter to change their strategy from delivery of products to sell towards a more customer-led approach (Organisation for Economic Cooperation and Development (OECD), 2020:52). This is because orientating service quality as customer-centric or student-centred has gained momentum since the increasing cost of education has created a new generation of students who demand value for their investment on education (Paricio, 2017:138).

While service quality is often associated with marketing, it is relevant to higher education as well. In HEI, researchers provide opportunities for their students to evaluate their learning and teaching experiences, typically in the form of end-of-semester or end-of-course evaluations. Universities that execute this exercise properly gain feedback from students about the services they provide. Accordingly, the students' evaluations of the services that HEI provide are critical in helping the institutions to improve.

HEI are supposed to accommodate the interests of stakeholders other than students. Zeliha et al. (2017:2057) depicted, as shown in Figure 2.2, that people (e.g., employees, donors, competitors, suppliers, and students within the local community) and organisations (e.g., government, ministry, industry, management, and financial institutions) are crucial stakeholder groups in a HE institution.



Figure 2.2: Higher education institution key stakeholder categories

Source: Zeliha et al. (2017:2056)

The dimensions of service quality are conceived differently by different stakeholders as their experiences, attitudes, demands and expectations vary. As key stakeholders, students are the primary customers and should, therefore, receive quality educational services; and, according to Wood and Su (2019:4, 8), parents are critical customers as they are funding their children's

university education by paying some of the costs of it. According to these authors, companies and other organisations also play a pivotal role as they employ students after obtaining their qualifications. Similarly, the academic staff are pivotal as they educate students by providing knowledge and skills that are required to execute the work effectively.

The demand for university services has increased significantly in every respect in the twenty-first century, which forces universities to produce more information and spread it globally to succeed in the competitive arena (Zeliha et al., 2017:2057). Studies conducted in this regard noted that the concern about quality in HEI is rising and the system of higher education should identify and meet the demands and expectations of the stakeholders thereby ensure the quality of the educational process (Jošanov-Vrgović, Vuković, Papić-Blagojević & Bolesnikov, 2019:353).

Several studies have depicted different standards for evaluating the quality in HEI. Yet, consensus has not been reached on a comprehensive approach for measuring quality at HEI. From the theoretical point of view, quality as a concept is very difficult to measure, but it requires serious attention in HEI (Dwaikat, 2020: 2). It is quite inappropriate to compare the quality of educational programmes in universities and colleges to the quality of a product line, product units or services of profit-orientated organisations. HEI design and develop their core activities so as to create, transfer, supplement, revise, expand and exchange knowledge, skills and scholarship to enhance the quality of living standard of a human being. These activities demand intensive, ongoing interactions among all stakeholders both within and outside the HEI. The complexity of HE as a service sector has, thus, caused various perspectives to be proposed regarding the measurement of quality in HE. In this regard, current literature has broadly discussed the concept of quality in HEI from three major viewpoints: input-perspective, output-perspective and process-perspective. Dwaikat (2020: 2) discussed that the input- perspective positioned itself with resources, infrastructure, student intake, academic staff, curricula and other resources of a given HEI or academic programme. Similarly, the output- perspective aligns itself with the outcomes of HE such as graduate skills, abilities, competencies and employability while the process-perspective focusses on the operations such as teaching methods, action plans describing the process for carrying out examinations and rules and regulations such as requirements for enrolling in a particular programme. This perspective is usually adopted by the HEI itself. Dwaikat (2020: 2) stressed that viewing quality in HEI with respect to the input-process-output model provides a thorough understanding of all elements that constitute the concept of quality in HE.

As discussed in Sections 2.5 and 2.6, many HEI have been using DE as an alternative approach to reach a larger group of people who cannot attend their education through a conventional system for various reasons. As an educational method and a philosophical construct, ODL has been identified as the most potent instrument for combating the educational problems assailing many African countries like Ethiopia. Scholars like Means et al. (2010:1) advised HEI to prepare to use ODL properly in the twenty-first century as an educational approach as it is the fastest growing sector of higher education gaining popularity both on and off-campus. However, Markova, Glazkova and Zaborova (2017:685-686) noted that the deployment of DE by HEI emphasises the concerns about the quality and effectiveness of online DE as opposed to the traditional educational system. ODL has been driven by the ever-increasing demand for well-informed and high-level personnel who can participate effectively in the global marketplace.

The stakeholders, students, instructors and support services providers, who are engaged in the provision of DE have not found it easy to translate the ideals of academic excellence into applicable terms (Sherry, 2003:435). Sherry added that it is important in the twenty-first century to ensure that DE gets acceptance worldwide and meets the demands of quality assurance. The concerns about the quality of DE have been discussed and debated by many different parties. According to Meyer (2002:9, 107), anyone working to address the quality of DE should understand that it is a unique educational environment and should stress those dimensions that contribute to quality in DE courses and programmes.

Generally, scholars do not agree on how the quality and efficacy of ODL should be evaluated. Advocates of online DL contend that learning at a distance can be as effective as or even more effective than the traditional one (Allen, Mabry, Mattrey, Bourhis & Titsworth, 2004:406; Shachar & Neumann, 2003:13). According to these authors, the types of media that are used to deliver the instructional content do not noticeably affect the learning outcomes; however, content, teaching methods, communication and learner support are extremely important for student satisfaction. On the contrary, scholars such as Markova et al. (2017:686) and Ni (2013:201) observed that students in ODL environments tend to feel more confused, isolated and frustrated, which can reduce the effectiveness of their learning and satisfaction.

Different characteristics affect the evaluation of quality in open and distance learning. For example, Ni (2013:200) and Costreie (2011:3235–3236) measured it against student learning outcomes, while Bekele (2010:123), and Bolliger and Wasilik (2009:104) used the overall students' satisfaction with DL experience as a dimension to measure the quality of ODL. The

quality of ODL can also be evaluated by assessing the attitudes of students towards DL (Salyers, Carter, Carter, Myers & Barrett, 2014:314). In their analysis of literature on the subject, Markova et al. (2017:686) showed that the ability of educators to effectively employ active learning techniques and the integration of high-level interaction and cooperation in the process of instructional design, the provision of high-quality support services and resources on a timely basis is directly related to students' satisfaction. They further argued that these factors affect students' perceptions of ODL and should be managed properly to provide them with a more comprehensive educational experience and greater benefit from this mode of education. They also highlighted a lack of effective teaching practices and communication skills as the two key challenges that deserve special attention to maintain high-quality DL standards.

As can be seen from the above discussion, there are significant differences in the strategies used to evaluate the quality of ODL, which shows that the field is multifaceted and has multiple dimensions and requires numerous measures for its complete assessment. Researchers and practitioners have been engaged in the development of quality indicators to ensure high-quality standards in ODL institutions. Literature shows that among the different sets of quality indicators, ODL practitioners agree on the aspects discussed next.

2.9.2.1 The commitment of a faculty to instructional design and delivery

As Ajmal, Arshad and Hussain (2019:139) posited, ODL needs a concise mechanism for instructional system design to be able to address the five dimensions of instructional materials development which are known as Analysis, Design, Delivery, Improvement and Evaluation (ADDIE). Constancio et al. (2018:2) divided these five dimensions into two phases that any ODL institution should use. The first three dimensions fall into the conception phase while the last two dimensions fall into the execution phase as explained in the ADDIE model that shows the course development flow. In general, a faculty should understand that instruction through the ODE approach requires new forms of material development that encourages active engagement of the learner in interacting with course materials, provision of learner support and assessment. It is therefore a requirement for ODL faculty to train all its staff members to accomplish their responsibilities accordingly.

2.9.2.2 Provision of modern ICT

During the COVID-19 lockdowns that were imposed mostly between 2020 and 2021 in most countries, the Unisa ODL students who had up-to-date knowledge and appropriate ICT skills

benefited more from the ODL services and programmes provided by the institution. This is because the virtual learning environment, communication and interaction were made more student-centred, less intimidating, and encouraged greater participation than face-to-face interaction (Dhawan, 2020:14).

Even though scholars such as Lorenzo and Moore (2002:5) posited that the quality and quantity of communication provided by ICT boosts the overall perception and satisfaction of students' learning, Allen et al. (2004:415) argued that it is debatable whether the introduction of ICT into the education system influences the effectiveness of learning. Guri-Rosenblit (2009:111-112) concurred with Allen et al. that only targeted and meaningful interactions can affect enhanced learning for both on- and off-campus environments.

Though no detailed study shows that ODL students lack appropriate ICT knowledge and skills due to their disadvantaged backgrounds, most distance students may feel more pressure to collaborate with others (Valentine, 2002:7) and learn through ICT. These collaboration and interaction issues should be systematically addressed while instructions are designed, and support services rendered to students.

2.9.2.3 Student support and resources

ODL students require both academic and administrative support to complete their programmes successfully. The support they get from both wings helps them to ease their frustration and become connected with the existing university environment without delay. According to Shikulo and Lekhetho (2020:2), student support services as the main component of the system of ODL help learners to easily adapt to the experiences of a university environment which they might have lacked or forgotten through the years. Tait (2000:289) defined student support as "a range of services which complement the course materials or learning resources" and argued that support services should not only be for students with specific needs, but all students. According to Markova et al. (2017:687), student support entails the following fundamental and mutually dependent functions: cognitive, affective and systemic. They further stressed that the latter contributes to the development of learning through the provision of tutoring and execution of assessment. Enhancing the commitment of students to their learning, elevating their self-esteem and establishing user-friendly information management systems also play decisive roles in students' learning development. With specific reference to ODL students, Thorpe (2002:116) asserted that collaboration and interaction are the key elements required for the effectiveness of

the system, and expertise should seek to integrate student support into the instructional design rather than just in delivery. Support services reduce students' anxieties about ICT, facilitate their online learning and make the learning experiences more enjoyable and successful (Gillett-Swan, 2017:28).

2.9.2.4 Continuous assessment

According to Fynn and Mashile (2022:3), most current literature states that continuous assessment is a sound assessment approach in HE designed to provide feedback to learners. It is also portrayed by Holmes (2018:24) that continuous assessment facilitates the reduction of destructive effects of high stakes once-off examinations (rote memorisation, cramming and high anxiety) and helps to promote student learning.

As a form of learning evaluation strategy, we use continuous assessment to evaluate students' learning throughout the duration of a course. It serves as a mechanism whereby students' performance is graded in relation to cognitive, affective, and psychomotor domains during a given period of teaching-learning process (Obi & Obineli, 2019: 9 -10). Mainly, continuous assessment is carried out to avoid the practice of provision of a once-off examination that is usually written at the end of the semester.

Assessment approaches that assess the performance of students in ODL institutions are diverse in nature, and the components of assessment in ODL systems should not be separated from the students' learning experiences (Nayak, n.d.:5). Many of the practices in ODL systems emphasise content knowledge assessment more than skills development and practical applications (Nayak, n.a.:1). As a result, the approaches adopted by the ODL institutions to carry out continuous assessments fall short in assessing the learners' meta-cognition levels, their creativity and other higher-order cognitive skills, which are needed in the world of work, and to support them to grow both personally and professionally. Kugamoorthy and Weerakoon (2018:59) identified a lack of face-to-face interaction between students and their instructors as the main limitation of an ODL system. Assessment is an essential component of a teaching-learning process and in an ODL environment, the structure and dialogue between teachers and students need to be incorporated as they enhance the engagement of learners in the process. Engaging ODL learners in the evaluation activities and giving immediate and constructive feedback on the exercises, assignments and end-of-term examinations ensure their understanding of assessment approaches. Keeping learners at the centre of the learning process enables an ODL HEI to effectively monitor, guide and strengthen the current training processes, and thereby promotes

the quality of higher education (Kugamoorthy & Weerakoon, 2018:59) which encourages students to validate the assessment procedures and credibility.

From the above discussion, it can be concluded that ODL is an innovative approach to education in the twenty-first century. Therefore, HEI in this educational environment should enhance the effectiveness of the assessment procedures regularly and adopt innovative approaches to continuous assessment.

2.10 CHAPTER SUMMARY

This chapter reviewed the Ethiopian education system, political history and the influence of policies derived from the political figures who controlled state power on the country's education practices. It also highlighted the new educational roadmap that has been implemented to solve the country's long-standing problems. Moore's theory of transactional distance and the constructivist theory of learning were used as theoretical frames to complement each other and underpin this study. In discussing the development of DE, its generations were reviewed together with their defining characteristics. The history of ODL in Africa in the pre-independence and post-independence eras and the current practices were also examined. The chapter has also addressed the SIM, their characteristics; how they should be developed for distance learners and by whom. Finally, the chapter outlined the characteristics of service provision in general and in higher education in particular, the features of quality services in HE, different sets of quality indicators that can be used in ODL and their effects.

CHAPTER 3: GLOBAL PERSPECTIVES ON THE QUALITY AND CHARACTERISTICS OF OPEN AND DISTANCE LEARNING MATERIALS

3.1 INTRODUCTION

Chapter 2 traced the history and development of education in Ethiopia in general and distance and open education in particular, distance and open education in other African countries and the generations of ODL. Learning materials in ODL; the meanings of quality, service and service quality in general and at HEI in particular, their dimensions and characteristics were discussed. Relevant theoretical frameworks, Moore's theory of transactional distance and the constructivist theory of learning were chosen to shape and underpin this current study. The features of quality of services in the context of HE were also addressed. This chapter reviews literature on global perspectives of quality and characteristics of ODL materials. It begins with a discussion of the development of theories of ODL.

3.2 DEVELOPMENT OF THEORIES OF OPEN AND DISTANCE LEARNING

Distance Education and ODL are pragmatic interdisciplinary fields that have been transformed and adapted to fit the changing paradigms (Bozkurt, 2019:2). James (1907:26) described pragmatism as a school of thought that reconciles the claims of science, on the one hand, with those of religion and morality on the other., limbers them up and sets each one to work. He defined pragmatism as a mediator seeking to harmonise with many ancient philosophic tendencies. It agrees with nominalism, for instance, in always appealing to particulars; with utilitarianism in emphasising practical aspects; with positivism in its disdain for verbal solutions, useless questions and metaphysical abstractions. According to James (1907:26), pragmatists hold that theories are instruments rather than "answers to enigmas, in which we can rest."

Being an interdisciplinary field, ODL calls for multidimensional theories, as no single theory can best explain it. Therefore, there is a need to explore different theoretical aspects. Holmberg (1985:16) explained that multiple theories help researchers to make decisions with confidence. In the same vein, Keegan (1996:56) classified theories of ODL into three groups: first, theories of independence and autonomy; second, theories of industrialisation of teaching; and third, theories of interaction and communication. A fourth category, which seeks to explain ODL in terms of a synthesis of existing theories of communication and diffusion, as well as philosophies of education could be added to this group (Bozkurt, 2019:263). Bozkurt posited that the definition of both DE and ODL should be kept up to date to explain the needs of the global teaching and learning

ecosystem and constant changes in communication technology better. Of the theories that attempt to explain ODL, the first six of them are at the frontier of the discipline and the equivalence theory treats what the predecessors did not address. These thinkers: Wedemeyer, Moore whose theory has been chosen to frame this study, Peters, Holmberg, Bááth and Sewart highlighted various issues related to ODL. They do not differ significantly in their conceptual analysis but only with their emphasis on the issues.

3.2.1 Overview of Charles A. Wedemeyer's Theoretical Contribution

Except for the contributions made by Charles A. Wedemeyer, the theories of DE have been predominantly developed by Europeans, Australians and Canadians. However, the practice of DE goes back to 40,000 BCE - 1450 CE when transmission of information was made using rocks, tablets, murals and with paper and written language in the form of images, graphics, text and rituals (Heydenrych & Prinsloo, 2010:12-13).

Wedemeyer, the premier American pragmatic theorist, conceptualised DE as a distinct “non-traditional” type of education. He recognised the independence of the learner and posited that such independence would be afforded to the learner by a variety of means and strategies, including anytime and anywhere learning and learner control over the pacing of the learning process (Moore & Anderson, 2003:4). He also acknowledged the necessity for the learner to take more responsibility for learning, which frees the instructor from the “custodial” duties of teaching. However, the real impact of Wedemeyer’s contribution to the theory and practice of DE is yet to be realised. This study has found it necessary to refer to Wedemeyer’s understanding of ODL to see the extent to which the SIM are empowering the learner to be responsible for his/her learning.

3.2.2 Overview of Otto Peters' Theoretical Contribution

Otto Peters (IGNOU, 1999:32) described DE orientating it in the process that it manages the system. Peters believed that highly developed industrial societies had generated a strong need for education, which, coupled with the phenomenon of population explosion, rendered the conventional system of education inadequate to fulfil the educational needs of the ever-growing number of learners. He contended that new approaches have to be explored, new techniques developed and made available for application. He argued that all these have to be ‘industrial’ in character as the need for them has arisen as a result of industrialisation. Partly based on his extensive survey made in the 1960s, Peters (2010:95) concluded that distance learning/teaching is an industrialised form of teaching and learning. Accordingly, he categorised the characteristics

of DE in the industrial sector. The first characteristic of DE that he identified is division of labour in the sense that the production of teaching materials, distribution and related activities are handled by different groups of people. Each activity is taken care of by a specialist who maintains the industrial lines of work. The second one is the mass production of teaching materials which is a phenomenon of industries. This shows a parallel between DE and the growth of industry as both shift from individual labour to a group effort, and manufacturing to mass production to meet higher demand (Peters, 2010:20-21). Other characteristics of DE – the systematisation of work procedures and layout – are parallel to industrialisation as they refer to strategies for success in the field. The structure of the campus of an ODL university is markedly different from that of a conventional university to carry out its design, editorial tasks, production, and the role of teachers is similar to that of managers of industries (IGNOU, 1999:33). Hence, it is postulated that the skills and knowledge of CW and CC affect the quality of development of ODL materials.

3.2.3 Overview of Borje Holmberg's Theoretical Contribution

Borje Holmberg also contributed to the theory of ODE by addressing the concept of guided didactic conversation as an organisation to ODL learning. The crux of Holmberg's thinking is: "The medium used to bring about empathy is normally a friendly conversation. This is the very simple background of my theory of teaching-learning conversations in DE" (Holmberg, 2006:1). According to Holmberg, the core of education is learning by individual learners. He believed that DE should be accepted as an appropriate mode of education suitable for individual learning as it makes it possible for the learner to rely on their personal work, which is essentially independent of direct face-to-face teaching. He further stressed that the distance learner is free to choose from various support facilities made available to them but the onus of learning or achieving academic objectives is on their own shoulders. The learner is engaged in what is called "self-study" or "independent study" (IGNOU, 1999:36). The essence of academic support from the ODL university is to build an academically fruitful relationship between the individual learner and the supporting institution in a relationship that is characterised by what he calls "guided didactic learning" (Holmberg, 2006:2).

3.2.4 Overview of John Bááth's Theoretical Contribution

John Bááth is one of the leading theorists in DE and an advocate of two-way postal communication in DE who believed that correspondence/DE has become a means of mass education by "industrialising education" (IGNOU, 1999:37). He also postulated that distance study

is essentially 'individual study'. His experiences in different components of ODL (as course writer, editor and designer) showed him that "a correspondence tutor could stimulate their students to most remarkable improvements using constructive criticism, encouragement, and personal involvement in the individual student's learning problems" (Bááth ,1994:15). Bááth argued that if remarkable improvements are to be registered in learner performance, tutor-comments, stimulated by assignment-based tasks should find an appropriate place in the plan of the industrialised kind of academic support as they constitute a highly desirable pedagogic component of DE. He also suggested that "pre-enrolment counselling" is helpful for adult learners to get support in defining and identifying their learning goals, selecting suitable materials to achieve the identified goals and in resolving their academic difficulties and promoting or sustaining their motivation. For this reason, this study has given maximum attention to the provision of explanatory feedback within the SIM to make them standardized modules.

3.2.5 Overview of David Stewart's Theoretical Contribution

David Sewart, another notable figure in distance education, aligns with Bááth's perspectives and emphasises the importance of incorporating the human element in the DE system. Regardless of the sophistication of the learning material's design and its extensive reach, Sewart underscores the need to uphold a "continuity of concern" for students' learning (Keegan, 1986:8). He seems to reject the notion that the package of materials in a DE system can perform all the functions of the teacher in face-to-face education. He argues that if the materials are supposed to function in a way that could serve as a face-to-face teacher, it would become an infinitely expensive package as it would have to show the multifaceted interactive engagement of the teacher and each individual learner (Keegan, 1986:96). Stewart further contends that if the conventional education system which focuses on teaching for the provision of knowledge and information insists on advisory and supportive mechanisms, the need for these mechanisms would be greater in DE. Stewart argues that just as an intermediary is necessary in most complex bureaucracies to bridge the gap between the individual and the institution, in distance systems an intermediary is necessary between the individual student and the teaching package. The intermediary is used by the institution but works for individuals (Keegan, 1986:97). Stewart considers that advice and support for distance learners raise many variable problems, and this creates the need for an advisory and supportive role of a distance institution besides the delivery of self-learning materials.

According to Keegan (1986:97), distance learners differ in their study styles, they need an advisory set up, and do not mingle with learning groups that can enable them to measure themselves against which. These factors coupled with infinite types of personal problems led him to think of the introduction of the human element as the only way to adapt a DE system to individual needs. This provision should preferably be available whenever the student needs it so as to promote individualised independent study. It is through this mechanism that he believed the age-old problem of DE, drop-out could be avoided.

3.2.6 Simonson's Equivalency Theory

Simonson (1995:5) acknowledged that various theories have been proposed to describe classical ODL and most of them emphasise independence and autonomy of the learner, industrialisation of teaching, and interaction and communication. He further explained that the traditional theories emphasise that ODL is a fundamentally different form of education while he believes that it does not refer to the theories that base their justifications on the capabilities of new interactive audio, video and computer systems.

The new telecommunications technologies have had a significant impact on the way education in general and ODL in particular is delivered to learners. Many people feel that the availability of powerful telecommunications systems promotes the effectiveness of ODL. Keegan (1995:5) supported this view and suggested that linking instructors and students electronically at various locations could create a virtual classroom. Simonson (1995:7), however, contended that the theoretical analyses of virtual education have not yet been addressed in literature, hence, the equivalence theory of ODL has emerged. According to Simonson and Schlosser (1995:14), equivalence theory posits that ODL's appropriate applications should provide equivalent learning experiences for all students: distant and local, for there to be expectations of equivalent outcomes of the educational experiences. This theory advocates designing instructional experiences for distant and local learners having different configurations but ultimately resulting in equivalent competencies. The theory is based on the view that ODL is a formal and institutionally based educational system where learners and teachers are separated from one another and where voice, video and data interaction occurs using telecommunications (Simonson, 1995:5-6). Simonson's equivalence theory provides a framework for designing and creating instructional experiences for local and distant learners. It probes whether equivalent experiences can produce equivalent outcomes.

According to Simonson (1995:7), there are two key elements behind equivalence theory: the concept of equivalence and the idea of telecommunications. The theory advocates equivalency and that although local and distant learners might have fundamentally different learning experiences, they should have equivalent value. Similarly, it promotes the amalgamation of both synchronous and asynchronous modes of interactions for DE, as long as the goal of equivalency of experiences is met. It is vital to create quality SIM so that the learning experiences of ODL can be on par with conventional learning and provide the same opportunities to all students who attend either of the two systems.

A common thread in the views of different theorists above is their vision to advance development of a learning society. Along with rapid economic and scientific changes globally, the needs, interests and aims of learners change as well. This confirms the common view that the teacher is no longer a central agent of the learning society, but he/she is the learner by himself/herself (Simonson et al., 2015: 15).

3.3 DISTANCE AND OPEN LEARNING: GLOBAL EXPERIENCES

Chapter 2 outlined the experiences of some African countries in the field of ODE as well as in Ethiopia. In this section, the practices of some selected Western, Asian and Latin American countries are discussed in brief to provide the global picture of the presence and operation of the ODL system.

Literature discusses that scarcity and exclusivity of the conventional schools framed with the concept of convocations and the current toughest economic condition worldwide encouraged ODE to evolve in many parts of the world to enable more people to be enrolled in DE offerings. In the same way, the twenty-first century job market demands knowledgeable and skilled employees, and this calls for the development of DE in size, shape and locations to address needs arising both from the demand and supply sides (Qayyum & Zawacki-Richter, 2018:3).

ODL is changing, and digital information and communication technologies (DICT) affect DE teaching, learning design and management issues (Qayyum & Zawacki-Richter, 2018:3). A lack of research in DE on macro-level issues makes it difficult to know how changes in DICT affect different countries (Zawacki-Richter & Anderson 2014:114) including the relationship of ODL with HE systems in various countries; the organisation and structure of higher ODL systems; how changes in DE affect open universities; the major challenges that ODL providers encounter and other concerns. The next sections discuss the experiences of some developed countries, namely

the UK, the USA and China¹, that have shown significant results in organising and structuring ODE to address the needs and circumstances of their national HE systems. The three countries were chosen based on their leading history and development of ODL including learning management systems and the increase in enrolment of learners in the system in their respective continents. They were chosen to serve as the best examples for developing countries such as Ethiopia.

3.3.1 Open and Distance Education in the UK

Ramanujam (1995:18) explained that in the UK [and nearly the whole of Europe], despite the attempts made by some academics and working-class leaders to impart education of some sort to the common masses in the nineteenth and twentieth century, 'EFA' was taken seriously only after the end of World War II. Although comparatively higher levels of education and literacy had spread among the people in the 1950s and 1960s, the educational aspirations of the common people were not sufficiently met, particularly at the higher level even in the 1960s and 1970s. Hence, Open University enrolment was considered a viable strategy to meet this challenge especially when the potential of the electronic media to spread mass education was realised. In the UK, the first Open University was established in 1969 (Ramanujam, 1995:18).

According to Perry (1987 as cited in Ramanujam, 1995:20), Britain had a long tradition of adult education programmes which were offered by the Workers Education Association and correspondence education which was delivered by Local Education Authorities to mention a few; however, it had to wait until 1969 to establish an open university. Qayyum and Zawacki-Richter (2018:85) explained that the UK has provided HE opportunities to students learning at a distance for nearly 160 years. According to these authors, the University of London (UoL), founded in 1836, was the first university to offer distance teaching in 1858, when the residential requirements previously in place for universities were abandoned. Over a hundred years later in 1969, the Open University UK (OU) was established, and it is still the UK's only single-mode distance teaching institution to have received a Royal Charter.

According to Ramanujam (1995:19), the need for the establishment of the OU was influenced by the following three factors:

¹ As to Benoit (2023) an adjunct senior research scholar at Columbia University's Center on Global Energy Policy, China is both a developing and developed at the same time.

1. There was a big gap in the provision of EFA to all classes of society.
2. The growth of educational broadcasting opened up new possibilities of taking education to the students who otherwise were left outside the boundaries of university education.
3. There was worldwide concern about the effects of the elitist traditions of education on society.

In 1971, two years after its establishment, OU appealed to many teachers who had, in one way or another, been denied HE and failed to become graduate professionals to enrol with it. Others were also attracted by its mission “open as to people, places, methods and ideas”, especially to the OU’s unique lack of entry requirements at undergraduate level (Qayyum & Zawacki-Richter, 2018:86). They noted that the OU also pioneered entirely new methods of teaching and learning at a distance, many of which have been adopted worldwide. Multimedia course materials included high-quality printed teaching units, radio programmes, TV programmes (broadcast originally at peak viewing times) and home experiment kits for those studying science subjects.

Since the 1990s, the non-conventional system of education in UK has been growing steadily and is gaining increasing acceptance and prominence as its impact on the original teaching and support structures of higher institutions has become evident (Qayyum & Zawacki-Richter, 2018:85). Qayyum and Zawacki-Richter also noted that developments in ODL have transformed distance teaching in the UK in two main ways. To begin with, all UK HEI adopted online platforms for administration, student support and provision of teaching resources. Online support in these areas varies but can enable learners to access teaching materials and recorded lectures online, undertake all administrative matters, engage with fellow students and in some cases, tutors/lecturers via forums, email and messaging boards. Second, even though universities such as Oxbridge still emphasise that the conventional mode of delivery is profoundly superior, there are increasing numbers of modules or courses, particularly at master’s level which are taught exclusively online, accessed entirely through the internet, or at a distance. There are also differences in the scope of the provision of courses through ODL in the UK. For example, UoL uses ODL aiming it to create a global impact; the OU retains its mission for social justice largely focusing on the UK and the University of the Highlands and Islands (UHI) of Scotland focuses particularly on geographically remote students. All three institutions have active research departments, most notably the OU’s Institute of Educational Technology (IET) which is still the only UK HEI that is solely concerned with ODL.

Up to now, the focus of the discussion has been on the successes of ODL in the UK. However, it is worthwhile considering the notable failures that have also occurred as they can serve as a lesson for developing countries such as Ethiopia where the concept of online learning was advocated both by the government and private educational institutions during the lockdowns during the COVID-19 pandemic. The UK e-University which was established in 2001 as a single vehicle for the delivery of the UK universities' HE programmes over the internet was wound up in 2004 by the Higher Education Funding Council for England (HEFCE) "having spent £50 million of public money and succeeding only in attracting 900 students" (House of Commons, 2005:3). This failure was attributed to several factors: the approach followed was supply-driven while it should have been demand-led; failure to form partnerships between the public and private sectors; insufficient market research; too much concentration on e-learning platforms, and "an over-confident presumption about the scale of the demand for wholly internet-based e-learning" (House of Commons, 2005:3).

3.3.2 Open and Distance Education in USA

As in other developed nations, correspondence study was in fact the first and only ODL setup used by postsecondary American institutions for generations (Moore & Anderson, 2003:21). According to these authors, the foremost correspondence programme in the US was launched in the late 1800s at the University of Chicago, where the teacher and learner were at different locations with the purpose of meeting their urgent education and training needs.

According to Holmberg (1995:48), ODL in the USA was launched formally for the first time at the University of Chicago in 1892 under the leadership of William Rainey Harper and expanded with modest enhancements in delivery modes until around 1970. Granger (1990:47) recognised the improvements of the delivery approaches referred by Holmberg and further mentioned the following factors as contributors to the development and implementation of ODL to become more acceptable: the more apparent it became the needs of students towards ODL; the recognition it received for its effectiveness by the faculties; and the growth of the proficiency of the institutions in the design and delivery of ODL. The adoption of ODL did not happen without difficulties; it faced challenges especially in the northeastern region of US, which was known to be home to many elite institutions, not to alter their centuries-old traditional ways of educating young men who came from established families (Granger, 1990:47).

ODL has been challenging the sovereignty of purely residential experience and is expanding at an alarming rate throughout the world. This is reflected by the increasing number of students every

year enrolling in ODL programmes being delivered in the USA. Snow and Coker (2020:40) revealed that by 2016, over 6 million students in the United States were engaged in ODL, and nearly half were exclusively taking online classes. Over two-thirds of the students were enrolled in ODL courses at public universities in contrast to the total number of residential students which was observed to drop by over 1.1 million (6.4%) between 2012 and 2016 (Snow & Coker, 2020:40). This shows that the growth in enrolment and the future of HE continues to move toward ODL.

Currently, the internet has brought the most profound effect on the US HE, as it has made it possible for digitisation to create a world library and communication platform where text, audio and video recordings are available to anyone with a computer, tablet, or smartphone connected to the internet (Snow & Coker, 2020:44). And it has been used to store anything that can be digitised and be transmitted in real-time programmes designed to be delivered online.

Several surveys have been conducted to assess the growth of ODL in the US, particularly during the online era. By the mid-1980s, 65 US institutions offered degrees through ODL (Perry, 1984:40) at a time when relatively few European institutions did so. According to Allen and Seaman (2014:10), in American HEI, the enrolment rate increased as the version changed from DE to ODL and the number of students enrolled in DE courses increased from 2 876 000 in 2000, to 5.3million online enrolments in 2012, reflecting a 3.7% increase, but an 8.7% decrease in for-profit numbers with half in fully online programmes. A later report by Allen and Seaman (2016:6) indicated that there had been a 3.9% one-year increase in ODL students to 5.8 million with approximately half taking all their courses at a distance. They stated that despite these impressive figures, the percentage of chief academic officers who said online learning was critical to their long-term strategy fell from 71% to 63%, and only 29% reported that their faculty accepted the “value and legitimacy of online education”. The schools with the largest ODL enrolments reported a 60% faculty acceptance, while 11.6% of faculty at schools with no ODL accepted it (Allen & Seaman, 2016:5).

3.3.3 Open and Distance Education in China

ODL in China is believed to have started in the 1940s and went through three phases, especially in higher institutions based on the main types of transmission technology (Li & Chen, 2019:7). According to Li and Chen, correspondence education describes the first phase, which is the period before 1979, which delivered education through the medium of postal communication. The second phase represents the period 1979–1998 where radio and television were used to broadcast lessons recorded in video and audio. Similarly, online education defines the third phase

starting from 1999 until the present time using the Internet as the main medium of teaching and learning.

According to Li (2018:243), one important reason for establishing DE institutes and providing DE programmes in China is to promote the development of, and investment in, human capital. Human capital theory sees education as an investment in human capital and posits that education can bring economic benefits to learners as well as promote national economic growth (Becker, 1994:24; Schultz, 1961:11). Similarly, the Strategic Office of the China Radio Television Video University [CRTVU], the largest and most influential distance HE institution in China observed that distance HE has made major contributions to the transformation of higher education from an elite system to a popular system (Li, 2018:243). The Strategic Office explained that this phenomenon occurred from 1979 to 2009. Through this period, CRTVU had a total of 7.2 million graduates, representing 24% of the total number of HE graduates over the same period since its establishment in 1979 (Li, 2018:243).

Li, Zhang, Chen, and Zhang, (2014:56) noted that China has become an ageing society since 2004 and the ageing population will increase rapidly in the next 20 years. With the improvement of security, medical insurance and pension services for the elderly, their demand for leisure education will grow and cannot be satisfied by campus-based universities. At the same time, urbanisation is accelerating, which raises the integration problems of farmers' work and life in urban areas. The National Bureau of Statistics of China (2015:1) confirmed that the percentage of the total population living in urban areas in China increased from 36.2% in 2000 to 56.1% in 2015. This urbanisation process requires significant provision of continuing vocational training for farmers to enhance their livelihood opportunities. According to the government of China, the right system to reach these groups of people has been found to be ODL. The development of DE in HE in China is summarised next.

In 1999, the Ministry of Education (MoE) of China launched a pilot project authorising four campus-based universities: Tsinghua University, Zhejiang University, Beijing University of Posts and Telecommunications and Hunan University, which had shown progress in the use of ICTs in education, as well as CRTVU – now known as the Open University of China (OUC) – to offer diploma/degree programmes in the so-called 'modern' DE mode. This can be regarded as the beginning of online HE in China. Between 1999 and 2003, the MoE of China approved 68 universities to participate in the pilot project for online HE. The CRTVU was the only Chinese university fully dedicated to online HE. Among the selected campus-based universities, most were

in Project 211, which is a project initiated in 1995 by the MoE to construct 100 national key universities and raise their research standards. However, until 2008, the MoE qualified 68 traditional universities to provide academic programmes through DE, and because of their relentless efforts, China's distance HE sector entered an era of burgeoning development (Wei, 2010:53). In this respect, China's MoE (1999:1) stated that:

the main factors that enabled the first four campus-based universities to offer online courses are that they enjoyed high educational standards and quality, had a good academic reputation, a well-defined operating plan, corresponding organisational infrastructure, staff, essential facilities and funds.

In 2011, the MoE eventually decided to establish the OUC based on radio and television universities (RTVU) and gradually engages in promoting education innovation, sharing high-quality education resources, and enhancing educational equity (OUC, 2021:1). In 2012, the number of registered students reached 3.59 million, including 1.05 million undergraduates, 2.54 million junior college students, 200,000 peasants, 100,000 soldiers, and 6,000 disabled students (OUC, 2021:1).

This century, China's open universities are undergoing a major shift from the practice of correspondence education to ODL via the Internet to satisfy the growing demands of open and lifelong learning in a rapidly expanding economy (OUC, 2021:1). The MoE regards the establishment of open universities as crucial to constructing a national open and lifelong learning system, which contributes to the formation of a learning society (CCRTVU, 2009:1).

According to CCRTVU (2009:1), open universities in China were established to build a knowledge economy in China and to further the international movement in DE. They were described as 'new-style' universities believed to have constituted Chinese characteristics and were commissioned to be open to all members of society. Their primary commitment was to reduce educational costs for many adult learners at the college level from the RTVU (Wei, 1997:21).

DE in China's higher education institutions have been increasing since 2017, and currently, there are over 2900 HEI that use this mode. Equally, the number of enrolled students has been rising, particularly in the past decade (Li & Chen, 2019:8). This has been fuelled by the rapid use of the internet and growing demand for continuing education.

For the last few years, online work, online learning and online life have become an indispensable part of life for Chinese people (China internet Network Information Centre [CINIC], 2017). CINIC

(2017) further indicated that from 2000 to 2017, the internet penetration rate in China surged from 1.7% to 54.3%, and the number of internet users increased from 22.5 million to 750 million. It is more than half of the total Chinese population and constitutes the biggest group of internet users around the world. It provides a good basis for extending and facilitating online education. In this regard, President Xi remarked, “China should aim to be not only a big internet country, but an internet powerhouse” (President Xi, 2014, as cited in Qayyum & Zawacki-Richter, 2019:8). According to the statistics issued by the Chinese MoE (2016), the enrolment in online HE in China has increased from 2.37 million to 6.45 million between 2004 and 2016 and the percentage of students in the entire HE system has risen from 11.9% to 17.4%.

Li (2018:245) posited that the distance HE system in China is principally made up of two institutions: the OUC and the online education programmes of traditional research universities. Li also explained that a few independent correspondence institutions provide small-scale distance higher education. The OUC is the country’s largest HE institution in terms of enrolments, as well as the biggest university in the world by some measures (OUC, 2021:1).

One of the main problems that ODL faces in China is its questionable status among the conventional schools. Zhang (2019:23) stated that the RTVU has long been designated “second-class” education with high inertia, problematic goals and disordered management. He further stressed that if open universities are to compete in the HE arena, they should devise different student learning support services which are pivotal for improving their choices. The provision of support services to students operated primarily by online tutors is considered the major characteristic that shows the uniqueness and strength of open universities (Tait, 2003:4). Direct interaction of online tutors with students is one of the unique characteristics of open universities. However, the newly established open universities in China have not developed a clear role definition for online tutors (Li, Zhang, Yu & Chen, 2017:190). These authors explained that open universities lack detailed documentation on the competencies required of tutors and highlighted the successful history of China in establishing the regulatory framework for distance HE and the policies it implemented to guide its development through years of effort.

Section 3.3.3 highlighted the experiences of UK, USA and China which have shown significant results in organizing and structuring ODL. They were identified for their leadership in development and increases in the enrolments of learners in the system. The UK is known to be a pioneer in the new methods of teaching and learning at a distance, many of which have been adopted worldwide. Similarly, ODL has become acceptable in USA as the needs of students for it increase;

it is increasingly recognized for its effectiveness by faculties; and because of the growth of the proficiency of the institutions in the design and delivery of ODL (Granger, 1990:47-48). The adoption of ODL in USA did not happen without difficulties; it faced challenges not to alter the centuries-old traditional ways of educating young men who came from established families coupled with the doubt to get value for money and legitimacy of online education. ODL in China is believed to be caused by the need for promoting the development of, and investment in, human capital. Research shows that China has become an ageing society since 2004 and the ageing population will increase rapidly in the next 20 years (Li et al., 2014:56). With the improvement of security, medical insurance and pension services for the elderly, their demand for leisure education will grow and cannot be satisfied by campus-based universities. In China, for the last few years, online work, online learning and online life have become an indispensable part of life, which foster the provision of online education (CINIC, 2017:1). However, China's ODL faces a questionable status among conventional schools though the country is recognized for establishing a regulatory framework for distance HE and the policies it has implemented to guide its development through years of effort.

The next section focuses on the core characteristics of ODL materials, which are the centre of gravity of the entire study. The discussion details the qualities of an engaging ODL material for effective self-learning, which are central to this study.

3.4 CHARACTERISTICS OF OPEN AND DISTANCE LEARNING MATERIALS

The foregoing discussion in section 3.3 underscores the significance of ODL in promoting access to education, especially to those who were left outside the boundaries of university education. ODL is best in that it is offered to allow access to education to those who are unable to attend regular colleges. It is important that such students should gain access to self-learning materials that can assist them in their reading (Jayaram & Dorababu, 2015:21929). A student studying through ODL does not have direct, face-to-face contact with the instructor, but can use various modes to access education, such as e-learning, video conferencing and email (COL, 2005:187).

According to Hashim (2010:4), ODL, one of the most innovative concepts in the history of education relies on self-learning materials developed by the institutions for the purpose of teaching and learning. Similarly, the success and effectiveness of ODL programmes depend on the design, development, and use of high-quality learning materials (Jayaram & Dorababu, 2015:21929).

High-quality learning materials should be student-centred, consider the needs and interests of the student and ensure that the student derives maximum benefit from their use (Zabidi, Woo, Rajesh Kumar, Fadzil & Syed Husain, 2017:70-71). They underscored that customised SIM are at the heart of instructional delivery in ODL. Tezpur University (2018:1) affirmed that self-learning materials should not only impart knowledge to learners, but they should also be in a better position to inspire and provoke students to learn. It also stated that the potential impact of DL on all education lies in the use of SIM complemented by visual, auditory, audio-visual and multimedia content.

The above discussion highlights the importance of effective design and development of instructional materials for ODL students, and that it enhances instructional delivery and maximises student attainment.

Section 2.7 discussed aspects that should be considered when developing SIM: organisation of the overall structure of a course; presentation of the content vis-à-vis the subject matter of a course; the importance of adopting a systems approach; acknowledging the characteristics of the target group of learners; and other important considerations to make while developing SIM.

This section discusses the characteristics of self-learning materials and the principles that should be adhered to (Chaudhary & Reddy, 2018:44-45). These authors highlighted the following principles:

1. The preparation of SIM should be aligned to the synthesis of learning theories (which are concerned with the process of acquiring knowledge, skills, and behaviour) and theories of communications (which are linked to, as applied to education, the forms and means of interaction between learners and teachers, guiding students on the presentation of content or discussion).
2. The preparation of SIM should be done in such a way that they arouse students' interest in learning, and to attract their attention to what is being discussed (Mart, 2011:2). There are several factors that can attract the attention of students, and these can include change, novelty, and attractiveness of the materials that they use in their learning, and according to Dişlen (2013:41), these should motivate and provide students with a purpose and direction to follow and to read them attentively so that they can achieve their set individual goals.

3. The development of SIM for ODL should ascertain that effective learning outcomes are attained when students learn actively and recall information purposefully (Khalil & Elkhider, 2016:147). Luque et al. (2017:928) corroborated that the information that was learned previously guides students into new learning.
4. Learning new principles, supported with access devices like 'clues or hints', might be directed either verbally or pictorially using SIM. This is a good way of guiding students, especially at the beginning or introductory stage of a text.
5. The development of SIM should consider various techniques of providing feedback to students' self-check exercises, assignments, academic counselling and tutorials left within the learning packages. Tullis and Benjamin (2011:109-110) concurred that there is a need for students to get feedback on their accomplishments as they are motivated to work with a clear direction on the path they are taking. This means that self-learning materials should have clearly defined objectives of instruction so that the ODL students can become fully aware of what they are expected to do to succeed.

Experts in the field of ODL recognise five of the principles summarised above as the core directives crucial for the development of SIM as discussed below.

According to IGNOU (2005:7), SIM developers need to know in advance that writing for ODL is a challenging task and requires different skills that make it different from that of books and journals written for conventional learning. SIM seek to exploit various means of communication to suit to the needs of the learners. Gbenoba and Dahunsi (2014:138) stated that the "ODL study material is expected to imitate what the teacher does in the face-to-face learning environment, meaning that the learner should be able to learn with or without the support of the teacher". They further emphasised that the material prepared for ODL should be self-explanatory, self-contained, self-directing, self-motivating and self-evaluating. According to them, study materials satisfying these requirements make the learner not to feel isolated in the absence of the teacher and other students as they keep the learner virtually engaged with the teacher. For this reason, the COL (2005:ix) advised that ODL materials should be prepared by a team made up of people with skills such as curriculum design, instructional design, tutorial support and print or web design skills. In this regard, Chaudhary and Reddy (2018:43-44) highlighted the five concepts discussed below as the most acknowledged characteristics of self-learning materials.

3.4.1 Self-Contained

Self-learning materials should be prepared in such a way that the content of the course becomes self-sufficient to save the learner's time for hunting additional source, or even an instructor (Koul & Ghaudhary, 1989:10). This would make such a learner not to feel disadvantaged as opposed to those learners who have access to additional sources and teachers. As such, the scope of the content of each unit of the course should be visualised in detail by maximising its clarity and avoiding verbiage and what is redundant and superfluous.

3.4.2 Self-Explanatory

According to Jayaram and Dorababu (2015:3), self-learning materials in an ODL environment should be drafted in such a way that a learner can easily comprehend the material without much external support. The primary tasks to be accomplished here are that each content of a unit of a course is analysed and presented logically [to maintain continuity and consistency of the content] considering the mental and lingual background of the student target group. This means that to make the concepts self-explanatory, the course materials should have intellectual clarity and linguistic simplicity, and use concrete illustrations, diagrams and pictures together with their meaning.

3.4.3 Self-Directed

According to Chaudhary and Reddy (2018:44-45), SIM should contain access devices, which can give the learner the required guidance, clues, and propositions at every stage of their learning. They are expected to guide the learner as to what they are going to do, how to study the learning materials, when to work on exercises, why and where to refer to the factual/suggested/model answers given to different exercises left within the learning materials. Fry, Ketteridge and Marshall (2009:14) described self-learning materials which satisfy the aforementioned features as self-directed materials which are presented in the form of easy explanations, with sequential development, illustrations and LA, and perform the role of a teacher in a classroom situation. SIM provide the learners with introductions in appropriate places to enable them to create a linkage with their previous knowledge, inform them about the content they are going to learn, the study skills that they are required to use to comprehend the content and the skills that they are expected to develop while learning. They should provide the learner with instructions of how to perform certain tasks within the course material. SIM anticipate doubts from the learner, raise them, provide

solutions and simplify them in different ways. Thus, the course materials should direct the entire process of learning.

3.4.4 Self-Motivating

As the ODL education system is meant for learners who remain off-campus quasi-permanently for most of their study time, the study materials should motivate learners, arouse their curiosity, raise problems, and relate their previous knowledge to familiar situations (Freeman, 2004:7-9). According to Mays (1998:9, 55-56), the size, colour and the design of ODL study materials should be attractive to the learners so that they would become fond of reading by keeping the course materials with them. According to the experts in the field, the content/subject matter should also be presented in such a way that it addresses the following important concerns to be able to fulfil the needs of the learners: exploit the experiences of the learners; use personalised style in presenting information; set interesting and enjoyable exercises; provide reinforcement and feedback at every stage of learning; and most importantly, the study units must be of moderate length so that students do not become tired or lose interest. Hence, the ODL SIM are considered self-motivating as they carry out a task like that of a live teacher in a classroom situation.

3.4.5 Self-Evaluating

As one of the critical characteristics, ODL SIM are designed to satisfy the attribute of being self-evaluating. ODL material that includes self-evaluation exercises provides distance learners with feedback that is incorporated within the package as students remain separated from the ODL institution as well as the teachers for a considerable period of time (Rahman, 2015:95). This study material presents a suitable array of activities and exercises integrated into the learning materials. These components empower the learner to solidify their grasp of the subject matter and allow them to assess their progress by consulting the included feedback (Yorke, 2003:479). This aspect is occasionally referred to as an embedded assessment system, thought to ensure optimal learning outcomes and encourage active engagement with the questions and answers contained in the instructional content.

Providing feedback on the exercises and assignments incorporated in the SIM enables the learner to make corrections to their trials or revisions in a study unit (COL, 2005:100). COL further explained that SIM contain explanations, discussions and reasons why the distance learner may make mistakes and direct the learner to solutions to the problem.

SIM should promote learning and enable learners to transfer learning to new situations with a particular discipline and across disciplines to engage in meaningful learning. To this end, SIM must enable the learner to identify similarities/parallels; to identify dissimilarities; to apply their knowledge in solving problems; and to proceed to advanced learning with greater ease and confidence (IGNOU, 2005:12). SIM must be prepared systematically and with great care so that they enable learners to attain the learning objectives. SIM with all the above-mentioned characteristics can function as if a live teacher were discussing the content with the learner.

Well-organised SIM which has the characteristics explained above also have a tutorial built-in characteristic. While doing a master's degree in DE through IGNOU, I learned that well-developed SIM could reduce the need for support services and that a carefully chosen and exploited medium of instruction serves no less a purpose than the content or the knowledge it communicates. DL materials which satisfy these characteristics are said to be self-learning. They allow the learner to be an active learner and become more interactive and task oriented.

3.4.6 Self-Learning Principle

Barandika, Beitia, Ruiz-de-Larramendi and Fidalgo (2013:1949) stated, "Self-learning is taking in information, processing it, and retaining it without the need for another individual to be teaching it in order for the understanding to occur". SIM should enable students to engage in meaningful learning on their own. They may also be referred to as self-teaching as they are designed in such a way that a student is able to work independently. Such material should be user-friendly and ensure that students understand the content and are able to achieve the desired learning outcomes.

A scrutiny of the types of SIM vis-à-vis the generations of ODL when they were used shows that they come in different forms. They may consist of written content, for example, prescribed books or textbooks (1st through 5th generations), or online material, such as e-reserves, instead of listening to a teacher or a lecturer in a classroom (3rd through 5th generations). According to Unisa (2019:1), students may be able to access information from relevant sources if computers and the internet are made available by the HEI and other partner organisations or centres. Junaidu (2008:99) agreed that the use of the WWW is the most interesting development in the use of technology in education for the delivery of course material and enhances students learning. From my experience as a postgraduate student at Unisa, I learned that the university has been aggressively scaling up its shift to the online mode in its programmes. Most of the self-learning material prepared for ODL students is organised in the form of electronic textbooks or electronic

course notes that the student can read at their own pace. Some materials also provide multiple routes of navigation through the material, and search facilities, integration of text, images, video, user interaction and question-answer tests (Maphosa, Bhebhe & Rugube, 2019:194).

Malison and Thammakoranonta (2018:1) argued that as the world shifts towards technology, people prioritise the learning approaches that use self-directed ways and HEI adopt SDL strategies to meet their need for lifelong learning. In this regard, Wills (2018:1) submitted that “SDL is led by curiosity” because learning occurs naturally when there is curiosity. By implication, the student is motivated to learn and acquires much more knowledge when the drive comes from within than from outside sources. Through SDL, students figure out a clear purpose for learning and the information they acquire from the packages is often relevant and more meaningful. A student is also compelled to search for deeper information about a topic and give a purpose to learning, leading to the desired results. In this sense, Hawkins (2018:449) held that university students with SDL skills tend to become autonomous in their learning, which contributes to their success.

When designing a learning unit, it is important for the ODL course developers to provide distance learners with useful information and guides, which can enable them to engage in independent learning. Typically, the materials are designed in such a way that the learner can undertake learning by themselves with occasional help from others including the teachers. Such an approach is informed by a constructivist learning theory, which places emphasis on active learning on the part of the student (Gazi, 2009:9).

While the above discussion emphasised the usefulness of SIM for ODL students, Kumari (2012:30) claimed that the use of learning materials that is difficult to understand contributes to student drop-out. This may be exacerbated by the ambiguity of the content, the lengthy nature of the reading text, and mismatches between the technology integrated to the reading material, among others (COL, 2005:208).

Well-developed ODL study materials should provide support services to learners. According to Seyed (2012:2-3), ODL materials enable students to develop strong problem-solving skills, identify problems and look for effective solutions on their own. Seyed further noted that the solutions could come from their friends they meet online or through exploration. In ODL, the challenges and obstacles that learners encounter should provide them with the chances to learn new things at their own pace and time wherever they may be. New knowledge is developing fast, and the labour force requires technologically informed personnel which the traditional education

paths cannot keep pace with (Dickson, 2018:1). ODL learners need to learn the skill of finding solutions instead of having solutions brought to them through instruction from their lecturers or tutors. Students who have managed learning using well-designed SIM learn how good it feels to develop their own ideas, and most importantly, how to complete the task without anyone standing over them to get it done (Briggs, 2015:1).

Furthermore, Briggs (2015:1) explained that in an ODL environment, students are assisted to acquire other important skills such as time management, self-assessment, and setting their own goals. These competencies are crucial for students and can apply anywhere in their endeavours. A student who is good at self-learning has the potential to develop other skills and learn how to stick to a plan until they achieve their goals. A student in ODL chooses a learning strategy that suits them and their environment best, which they find most engaging and allows them to use the designed self-learning materials (Mahlangu, 2018:20).

Similarly, Constancio et al. (2018:3) contend that technology-mediated provisions of self-instructional courses with the fundamental characteristics are the core educational activities that should be built into the learning environment to enhance self-directed study. They explained that the structure of the study unit consists of the presentation and content to be studied with tests at the end of each unit to verify if the learning objectives were met.

3.5 UNDERSTANDING THE QUALITY OF OPEN AND DISTANCE LEARNING MATERIALS

As explained earlier, this study assumes that the quality of ODL materials can only be maintained if the materials are developed by paying attention to their fundamental characteristics. The study also considers the professional development required by the CW to enable them to be equipped with the specific skills to keep the structure of SIM.

This section discusses the practices of two open universities with which I experience as a postgraduate student and PhD studies respectively: IGNOU for my master's degree and Unisa where I am currently doing my PhD.

3.5.1 Experience of IGNOU

IGNOU was founded in 1985 through an Act of Parliament, and since then it has been striving to build an inclusive knowledge society through inclusive education (IGNOU, 2023:1).

IGNOU began its training with two academic programmes: Diploma in Management and Diploma in Distance Education with about 4528 students (IGNOU, 2023:1). These days it serves the educational aspirations of over 3 million students in India and other countries. It has 21 schools which are networked with 67 regional centres consisting of around 2 000 learner support centres and 20 institutions located abroad (IGNOU, 2023:2). Currently, IGNOU runs training in about 200 certificate, diploma, degree and doctoral programmes run by a total of nearly 250 faculty members and 230 academic staff at the headquarters and regional centres and over 35 000 academic counsellors from conventional institutions of higher learning, professional organisations and industry, among others.

As spelled out in its vision, the university is committed to quality in teaching, research, training and extension activities, and acts as a national resource centre for expertise and infrastructure in the ODL system (IGNOU, 2023:2). To address these concerns, in 1990, it established a training institute to serve the South Asian Region following the proposition made by COL, the Asian Development Bank (ADB), the Ministry of Human Resource Development (MHRD) and the Government of India (IGNOU, 2023:2). Later, the institution was upgraded to the Staff Training and Research Institute of DE (STRIDE) in 1993. Though STRIDE was initially tasked to train IGNOU staff and the staff of open universities and DE institutes in India and South Asia, it has gradually expanded its jurisdiction by responding to the DE needs of many countries in Asia, Africa and the Caribbean Region. Other than provision of training, STRIDE conducts capacity building programmes (in developing a series of handbooks on different ODL themes) and research activities for all DE institutes across India and in the international arena (IGNOU, 2005:4).

As experts of the field believe, the success and effectiveness of DE systems largely depend on SIM which can perform the functions of a live teacher and thereby a distance learner shall have all the learning experiences which a student may have in a classroom situation (IGNOU, 2005:6). Such experiences can be addressed through the provision of the necessary training for CW. With the goal of fulfilling one of its visions, the institution embarked on the creation of a training handbook which was specifically designed to offer training to CW for Open and Distance Learning (ODL). The handbook explains that writing for DE is a more challenging task and quite different from that in the conventional system or writing for a book or a journal article (IGNOU, 2005:7). IGNOU believes that training enables CW to prepare learning materials that suit the needs of learners and to pay attention to the approaches which motivate them to keep studying and become successful in their learning.

The handbook has seven sections focusing principally on two important phases of the print materials in DE: (1) the whole course of actions required for writing SIM; and (2) the how and why of revising the SIM (IGNOU, 2005:7).

I chose IGNOU to learn about best practice in ODL because it has been recognised by the COL for its excellence in this area (COL, 1998–1999). My choice was also informed by the A++ grade the university achieved from the evaluation by the National Assessment and Accreditation Council (NAAC), India at the 54th Meeting of the Standing Committee on 08 January 2021.

This study explored relevant materials and browsed websites that could provide guidance on how to check the effectiveness or quality of SIM used by the open universities. The material found having relevancy to this study was the QM Higher Education Rubric which was published in 2018 and has been used by all HEI of the USA as a standard for the design of Blended and Continuing and Professional Education.

The rubric consists of a set of eight general standards and 42 specific review standards (23 of which are designated as essential) for evaluating the design of online and blended courses. The eight general standards are: course overview and introduction, learning objectives (competencies), assessment and measurement, instructional materials, LA and learner interaction, course technology, learner support, accessibility, and usability. It is complete with annotations that explain the application of the standards and the relationship between them. While there are multiple aspects to course quality, QM reviews course design only, not delivery or faculty performance. I was also limited to the same dimensions and found it appropriate to adapt it to suit my purposes and to use the minimum standard that the organisation has fixed for an institution to meet QM review expectations. The QM rubric requires a course/module to satisfy each of the 23 essential standards and achieve an overall score of at least 85 (85% of 100 possible points) [cf. appendix -vii] to be considered effective ODL material.

3.5.2 A Reflection on the Experiences learned from IGNOU's SIM

1. Course breakdown into modular forms

Every course has been prepared in a modular form, which is called a block, and each block carries 4-6 interrelated units, each of which is complete in its own right.

2. Nature and purposes of the course/module/unit introduction

An introduction is an important access device in ODL courses and can occur at various levels: course, unit and topic. It can be included in a tabulated form, as demonstrated by many institutions, consisting of a list of orientations that refer to what is to be done under a title or in diagrammatic form as it is presented in the modular materials of Unisa (COL, 2005: 75-76). The same publication stresses that an introduction serves as a device to provide learners with a technique that enables them make sense of what they are about to learn and reminds them of what they have already learned and what they already know. It provides a map or chart to show how the new topic links to previous topics and provides an overview of what they are about to learn.

As a learner is physically absent, there should be an inbuilt structure in the introduction where the writer should receive, welcome and inspire the learner. The writer should create an impression that can make the learner feel that their study is easy and manageable. The training handbook advises a course writer to begin with the material or the knowledge that the learner is expected to have already acquired and is familiar with (IGNOU, 2005:39-40). An introduction should consist of the following three major components: structural component, thematic component and guidance component. The structural component gives information about what has been learnt earlier to establish a link between what a learner has already learned and what they are going to study in the unit at hand. The thematic component provides a synopsis of what is to be discussed in the following lesson. Its main purpose is to catch the learner's attention by creating a friendly dialogue with them. The guidance component provides study guidance to the learner that informs them what they need to do before reading through the material and makes the learner aware of the knowledge they are supposed to get to realise the objectives of a course/unit (IGNOU, 2005:39). As COL (2005:138) explained, the introduction should highlight to the learner the basic requirements needed to successfully complete their study. This includes what the unit/module/course will cover, why it will be useful to the learner, and how the unit/module/course follows on from the previous similar materials. The proposition is that the SIM should inform the learner about all that they need to get the best out of the course/unit. The CW should make the introduction part as short as possible and write it precisely and concisely (IGNOU, 2005:40).

Just like the access devices mentioned above, COL (2005:111) noted that students appreciate an introduction because it enables them to orientate themselves to the teaching material. An introduction serves both the learner and the instructor in the sense that it directs the learner to the resources and questions about the aspects of the course, enables communication with their

instructor and allows for timely provision of feedback to the learner (Moore & Anderson, 2003:453).

According to COL and ADB (1999:7), an introduction is an outline or an overview that mentions the main points that should be covered or simply a list of contents. It stimulates the interest of the learner and gains their attention by indicating the ways in which the content of the present unit is linked to others in the whole course.

This researcher has learned that the modular materials of IGNOU highlight to the learner what the course is all about, the number of blocks/modules into which the course is divided and its structure. The researcher has learned further that an introduction of a block/module of SIM of IGNOU briefly revises what was discussed in the previous block, mentions very important points of each unit of the block and tries to explain how the concept grows to a higher level. Every block addresses the learner in its introduction, highlights what the block refers to, and explains essentially the nature of the block. It highlights what each unit consists of in the block and motivates the learner to keep reading to derive maximum learning. In the introduction of a block/module, the learner is reminded of how the last unit of a block is related to the first unit of the block/module that is coming forth. It mentions the way explanations are given through illustrations to make the link proper and sound.

3. Nature and purposes of the course/module/unit objectives

As a fundamental component of advance organisers of the SIM, educational objectives, according to COL (2005:130), are statements constructed and included in the learning materials to correctly describe the outcomes that the learner is expected to perform to prove that something has been learned. COL stressed that the aims and objectives are a distinctive feature of SIM because they are clear statements as to what the teacher is planning to do and what learners should be able to do after completing their study. Lockwood (2017:20) also asserted that the objectives are inbuilt in the SIM as a component of an inhouse style and are always provided at particular points to encourage the learner to readily refer to them and audit their progress of learning. Similarly, COL and ADB (1999:5-6) concurred with Lockwood that an objective is a more specific statement that demonstrates what the learner will be able to do after working through the SIM which are designed for a specific programme. Moore and Anderson (2003:290) explained that students who learn through ODL are more likely to learn what their instructor intends them to learn from the material if those expectations are made known clearly and early before the course begins.

According to COL (2005:35), objectives are crucial for CW as they help them to determine the content and complexity of a course to be studied by learners. It further explained that CW should formulate the objectives of a given course ahead of writing its contents to address the needs of the target group properly. Chin (2000:4) added that well-designed objectives can provide a basis for later construction of assessment items.

Self-learning materials should have clearly defined objectives of instruction for distance learners to get prior information about what they are expected to do to succeed in their learning and check whether they are on the right track (Maphosa & Bhebhe, 2019:3). Objectives are also known as training outcomes (Gujjar & Malik, 2007:58), and specify the required positive effects of learning described in terms of observable performance of learners, which are usually demonstrated in 'behaviour[al] terms' (Jayaram & Dorababu, 2015: 3).

From his experience in using IGNOU's training handbook, the researcher noted that the statements of objectives are always part and parcel of the SIM for distance learners. They portray what a learner should be able to do or do better after completing learning in a unit compared to what they could not do before they attended the lesson (IGNOU, 2005:41). In my view, the objectives are the competencies that a learner is supposed to display as signs of achievement.

Instructional designers, instructors and learners benefit from statements of objectives but in different dimensions. According to Moore and Anderson (2003:290), well-designed statements of objectives should convey what the instructor expects the student to learn from it. Objectives enable an instructor to engage their learners in higher order of thinking and assess their effectiveness accordingly (Arul, 2007:4). COL (2005: 54) submits to Arul's explanation and infers that instructional designers benefit from identifying learning objectives as it enables them to choose appropriate media for dissemination of contents, to create LA and to prepare in-text and self-assessment questions. COL further expands on this discussion, concurring with Arul, that tutors also derive advantages from the statement of objectives. These objectives serve as a reminder to tutors about the anticipated outcomes for their students upon completion of the course, in relation to the key aspects of the curriculum. Students can also use objectives to help them choose a course, check their progress and so on.

According to COL and ADB (1999:5-6), clearly developed statements of objective: provide instructional designers a clear indication of the outcomes expected from the learning materials and procedures they are developing and a basis for updating a course; inform teachers and instructors about the behaviours learners should develop and be evaluated on; enable learners

to figure out what their instructors require them to effectively comprehend every section of a course and to manage their own efforts toward attaining the course objectives; and allow the development of tests that tell teachers, instructors and learners whether the objectives have been achieved.

IGNOU (2005:41) summarises the benefits obtained from carefully worded statements of objectives (in behavioural terms) as follows:

1. They guide CW while planning the instruction and the unit. It is believed that CW properly identify, before developing the learning package, tasks that their learners will be able to do exactly after they cover a course/a unit or a lesson.
2. They direct instructors while choosing and applying techniques that should be relevant to assess students' learning.
3. They advise and support the learners to figure out the knowledge, attitudes and skills they must learn or achieve in each section of the course. Accordingly, well-articulated objectives enable learners to manage their study plan to become successful in their learning through assessing their own progress on a timely basis.

Literature on ODL also show that there are problems associated with writing statements of objectives. According to COL and ADB (1999:5-6), objectives tend to be described narrowly which fail to address a full body of learning outcomes and they may introduce a topic or a course or a module in a very dull way. Similarly, they pointed out that learners might face difficulties in understanding the objectives of the lesson when new terminologies are introduced, until they have studied the materials. This implies that the more specific the objectives are, the narrower the room for learners to express creativity, potentially leading to a lack of encouragement for thinking out of the box.

Up until now, the discussion has focused on the statements of objectives constructed in behavioural terms that show measurable changes to be brought about by the learner at the end of every unit of instruction. These objectives are made by the instructors and learners do not have a say in drafting them. Constructivists, however, encourage and invite learners to construct their own learning objectives and work together with their instructors so that they can generate meanings rather than having to work toward achieving pre-determined or prescribed objectives drafted only by their instructors (COL & ADB, 1999: 5-6). As per COL and ADB, the constructivist learning theory emphasizes involving learners in collaboratively formulating learning objectives

alongside their instructors and peers. This collaborative approach offers mutual benefits by jointly accepting these objectives as indicators of learning progress. This approach also helps in avoiding the limitations of overly specific objectives, which have been criticised for rendering learners as passive recipients in the context of behavioural objectives.

Finally, statements of objectives are supposed to be written in such a way that the expectations they require learners to accomplish are stated as actions that they can demonstrate. According to COL and ADB (1999:5-6), these actions are readily evaluated as having been performed to the standard of performance specified. This necessitates using 'action verbs' while writing the statements of objectives.

In my investigation of the availability and appropriateness of access devices in the SIM, I learned that statements of objectives were not included either at the course level or for the block/modular in the structure of the SIM of the courses I referred. Unit objectives, however, were properly integrated into the learning materials and were explicitly constructed in behavioural terms.

As discussed above and IGNOU stipulates, the CW should pay attention to the inclusion of objectives at the course, module/block, and unit level since they guide learners and their instructors on their course of learning and teaching respectively. For the saying "the purpose of teaching is learning" to hold water, the modular materials of ODL should consist of statements of objectives at the course, module, unit and section levels to encourage students to be actively engaged in their learning as they enable students to check their understanding of the courses.

4. The time required to successfully complete the study of the course/modules

Throughout the blocks, it is explained that the learner should cover each unit with 4-5 study sittings (6-10 hrs.).

5. The size of the modules

The size of the modules in the average was between 60-70 pages; they were easy to carry, are portable and are manageable.

6. The binding style and the colour of the cover pages

The blocks/modules were bound with a hard cover having a light, neutral colour. The binding of the blocks did not keep the pages from being separated from the book as they were stapled and often came apart.

7. The fonts used to represent the different structures of the content

The spacing between lines of texts (1.15) was small and the text was written in size 11 font; this made the readability of the texts a bit difficult. Under normal circumstances, texts should be spaced within 1.5 cm and be written in a size 12 font. The font used throughout the course were the same, Times New Roman, with different sizes: bold 22 size font for unit title, bold with a relatively smaller size for sub-sections. The significant divisions within the sub-sections were in still smaller bold typefaces to make it easier for the learner to see their places within sub-sections, and the items which needed to be highlighted were numbered (i.e., (i), (ii), etc.). For purposes of uniformity, every unit was partitioned similarly throughout the course.

8. Nature and purposes of the in-text questions

There were in-text questions included in every unit (their number depended on the depth and coverage of the unit but on average, there were at 4 to 5 questions per unit) under the title: Check Your Progress and they were thought to motivate the learner through checking their progress of learning. The questions were inserted in a gray highlighted box to enable the learner to refer to them quickly and not to pass them by. The learner was advised to work on the exercises in such a way that their purpose was served satisfactorily in comparing the answers with the model answers given at the end of each unit.

The in-text questions also served as a way of linking conceptually interrelated subject matter placed adjacently and informed the learner to use the space given below the question for writing the answers; to refer to the suggested model/sample answers found at the end of each unit to cross-check their attempt; and that the exercises were not meant for submission for grading but functioned as study tools to help the learner keep on the right track as they read the units.

9. Nature and purposes of the feedback given to questions/activities

Being the main component of SIM, and the most fundamental access device that motivates a distance learner, feedback to a learner's performance be it in the form of tutor-comments on tutor-marked assignments or as a response to their trial to the questions included in the SIM, enables the learner to check their progress of learning (COL, 2005:100). Distance students need to be led in very small steps, in their progress of learning, and one of such activities is to provide them with test questions they should answer together with feedback to check the success of their learning (Peters, 2010:126). Malison and Thammakoranonta (2018:5) supported this idea referring to Knowle's theory of adult learning which asserts that adults, being self-directed learners, need

opportunities to practise their new skills and receive immediate feedback on their learning process. According to COL and ADB (1999:8-1), SIM should be developed in such a way that their design encourages learner interaction and provides learners with proper feedback on their performances without delay. They also stressed that designing activities and provision of feedback to learners for their attempts were two sides of a coin. Feedback supports learners to know whether they are on the right track. This idea was supported by COL (2005:3) in stating that learners should receive continuous feedback on their performance as feedback helps them monitor and improve their own progress through the SIM. COL states that CW should provide feedback that corresponds with the task they assigned learners based on the outline already communicated. As outlined by COL, activity questions could potentially lack definitive answers, or they might solely present alternatives or take the form of commentary or discussions on potential responses. However, CW were expected to provide feedback which was as close as possible to the point where the activities were formulated (COL,2005:140).

COL and ADB (1999:112) argue, however, that SIM need to have sample answers or provide suggestions to the learner to contact their tutor to discuss answers, or to ask the learner to send answers to their tutor and ask the course writer to design a face-to-face tutorial session so that their students can get access to corrections or amendments. It is advisable to schedule some days (once in a semester for about two or three days) to get students at their study center to clear out certain doubts. It also helps to create introduction with their instructors and tutors. It is recommended that distance learners get feedback on their performance and the appropriateness of their responses to the questions, as feedback would help them to confirm ideas and relationships or to know that where they might be going wrong. Feedback is a core component of learning (COL, 2005:8). This is strengthened by Kelso (1995, as cited in Moore and Anderson, 2003:15) who emphatically states that “without such feedback, learning does not typically occur”.

Though there are debates concerning the nature and place of feedback, Ausubel and Robinson (1971, as cited in COL, 2005:101) provided below a summary of how feedback can be incorporated in the SIM if they are to promote self-learning:

- Feedback needs to be continuous (especially for concept learning).
- Feedback should be provided as immediately as possible (to prevent errors becoming embedded).
- Feedback must be detailed (not just an answer of ‘right’ or ‘wrong’); and

- Learners should be told why their answers were wrong or what the logic is behind the correct answer (COL, 2005:101). Detailed and personalised feedback should be given to learners (COL, 2005:198).

Besides providing unambiguous questions and corresponding feedback, the speed with which feedback is provided is also a critical factor (COL, 2005:8). COL argued that the efficiency of feedback will be in doubt if the time lag between posing questions and providing feedback is wider. The larger the time gap, the stronger the likelihood for the learners' misunderstandings to be reinforced.

Researchers like Tabbasum (2014:106) have also argued that although feedback has an irreplaceable role in SIM, respondents at large scale have commented that feedback is neither linked with the statements of the objectives already identified before presenting the contents nor is correctly described to serve the intended purposes. This concern is also supported by IGNOU (2005:60-61) in mentioning that model answers should be based on the lessons already covered in the unit, which is one of the distinctive features of SIM. Properly written SIM safeguard CW from constructing assessment questions that fall outside the scope of the materials presented to the learners.

With reference to the topic under discussion, this study has also consulted the training handbook of IGNOU (2005:60-61) and learned that the material urges CW to provide model answers/possible answers to all types of questions included in each unit of the blocks with the intention of making them an integral part of the teaching. The training material states that model answers should enhance learning through maintaining the motivation of distance learners and advocates the appropriateness of providing answers immediately after the questions. It is noted by IGNOU (2005:60-61) that the model answers may not necessarily be the best answers to the questions asked. A distance learner may have a different answer to the model answer; the purpose, however, is to enable the learner to check whether they are progressing along the required path of learning.

In my view, most distance learners need to be given the answers at a different location to avoid the temptation to refer to them before they attempt to answer them for themselves. The SIM of IGNOU revealed that feedback is included for every type of question/activity in each unit of a block, and they are directional so that the learner can refer to where the answers can be found. They facilitate learning and motivate the learner to keep learning by encouraging the learner with positive comments, appreciation and remarks. They also advise the learner to look at the

question from the expected perspectives (learners might be expected to think of the questions somewhat in a different way that might not be related to the question).

10. Nature and purposes of summaries provided for units

A summary of all that has been covered in a unit of a module provides a learner with a review on the delivered lessons. A summary, according to COL (2005:144), is referred as the 'after device' learning organiser and is concerned with helping learners round off their study of the unit. In the next pages of this same material, it is also discussed that it is so helpful to give learners a list of summaries where the unit is ending to avoid confusions about what the most important points are in a unit of learning.

Instructional designers advise and call it binding to provide a summary in every unit while developing SIM to help a learner to be tuned to the outcomes of their learning engaging them to work on all types of assessments included within the learning material (Morrison, 2012, as cited in Maphosa et al., 2019:192).

Numerous research papers explore various formats for providing summaries. These can include paragraph-based summaries, numbered or bulleted lists detailing good practices, incorporating examples within the summary, emphasising key points covered within the unit, highlighting concepts that connect to the next unit, or even using diagrammatic representations to consolidate all the information (COL, 2005:144-148). COL and ADB (1999:6-10) also stressed that much like at the end of an essay, there should be a summary at the end of a unit to enable a learner to get a coherent understanding of the material covered and the essential points that need to be remembered before they turn the page to the next unit. The material also directs a SIM writer to incorporate a list of important points that the learner is expected to pay attention to and accentuate their learning.

COL (2005:111) explained that a summary of a unit is typically highly rated by distance learners as an 'after device' that helps to orientate them to the teaching material. He also mentioned that a summary is often identified by a distinctive typeface; halftone shading or being placed in a box.

As I investigated the experiences of IGNOU, I learned that a summary of important points was included at the end of each unit of a module after presenting the subject matter in detail. As to IGNOU (2005:65), summary supplies feedback to the learners which is believed to assist the learner to remember the core concepts and issues discussed in the unit. It reminds us of those days when our teachers were applying the technique to sum up their presentation at the end of

the lecture/class. Finally, IGNOU highlights two main purposes that a summary can serve: recapitulating the main learning points and reinforcing the motivation of the learner for learning as it builds the capacity of a learner to manage their learning without much support from others.

11. Nature and purposes of glossaries provided to explain technical terms included in the texts

As an important access device, a glossary of terms used in the SIM across the units provides a helpful reference tool for learners. It consists of a list of vocabularies that need special attention. In some cases, a glossary may be kept at the end of the course to serve the entire course (COL & ADB, 1999:86). According to IGNOU (2005:66), the glossary will help the learners comprehend the concepts discussed in the material. It refreshes and clarifies the learners' comprehension. (It should also be noted that the inclusion of a glossary is not a must. It depends on the nature and requirements of the content discussed.). In the view of IGNOU (2005:66), key words, difficult words and ambiguous words which need to be explained for better comprehension should be listed at the end of the unit. The glossary may contain working definitions of all new concepts introduced in a unit. This idea is supported by COL (2005:133) in positing that some courses contain glossaries to explain the meanings of key words, and these may be at the back of the course materials or published as a separate item. To make these glossary items even more accessible, the relevant entry is sometimes reproduced alongside the first use of that term.

Despite all the services that the glossary is supposed to provide to the self-learner, I found that the SIM of IGNOU developed by STRIDE do not have glossaries where they should be placed (either at the end of the last block of the course or at the end of each unit). I believe that the quality of the SIM materials would have been more valuable if glossaries had been incorporated.

12. Nature and purposes of the Icons included in the modules

Icons are used in the SIM to identify or flag features of activities that are thought to be cared by the learner. According to COL (2005:133), studies conducted by the open universities show that icons perform a valuable function in drawing the attention of the learner to an activity that follows and to the different types of audio-visual materials integrated with it. COL also warned that there may be problems with using icons and other typographic features as too many can be confusing. In his explanation, they noted that an icon effectively fulfills its intended role when it successfully represents a thought, task or concept. Careful and strategic incorporation of icons can prove highly effective in drawing the learner's attention to key elements and components within the self-learning materials.

Icons, according to COL and ADB (1999:158), are signposts or visual symbols that resemble the thing they represent in the learning materials. They indicate to the learner that they need to undertake a particular activity while reading or learning the content presented in the learning materials. It is not, however, enough to incorporate icons in the SIM; there should also be explanations of what they are representing to guide the distance learners through their learning.

In this case as well, I observed the absence of icons within the learning materials. None of the individual blocks within the materials contained icons, leading to the conclusion that learners were missing out on the advantages they are meant to derive from them. The quality of the self-learning materials (SLM) could be improved if icons were integrated into them.

13. The house style or inhouse structure kept by the modules/blocks

According to COL and ADB (1999:158), ODL materials should establish and adhere to a house style as it is believed to help the learner through repetitive exposure to the style used in the learning material (COL, 2005:135). An in-house style gives due consideration to the typefaces, type size, length of lines, size of margins, use of bold, italic and other variants of the typefaces when developing SIM. It also pays attention to the treatment of headings, subheadings, footnotes, position of illustrations and captions in relation to the text and editing and reference style. COL and ADB (1999:169) also mentioned that establishing a consistent house style in an ODL material contributes to the implementation of quality assurance.

Paying attention to what has been discussed above, it is relatively easy for one to identify a given module developed by STRIDE of IGNOU. It keeps the available access devices uniform so that the learner gets the required directions for each learning task expected of them to be able to sit for the final exam.

14. Naming of the modules and their codes

Every module is represented by a 'block' and carries its own code, naming, the logo of the university, a diagram representing the content of the module/block, and the naming of the course together with its course number.

15. The content (the presentation/subject matter)

I concur with the understanding of COL (2005:6) who posited that distance learners should be provided with the best teaching and training materials that are not undesirably influenced by

personal preferences of a teacher or trainer. According to distance educationalists, SIM need to be developed in such a way that they enable all distance learners to receive the same teaching material. COL also emphasised that SIM should align with prevailing perspectives and accepted arguments, rather than reflecting solely the writer's viewpoints. This alignment is crucial to secure acceptance among both traditional and ODL audiences.

Regarding the features that SIM should have, Mays (1998:9, 55-56) pointed out that they should arouse students' attention and present the content/subject matter in a way that meets the needs of the learner. They should exploit the experiences of the learner, use personalised style in presenting information, set interesting and enjoyable exercises, provide reinforcement and feedback at every stage of learning, present assignments in order of their difficulty level, and ensure that the study units are of moderate length. They should also be supported with pictures/diagrams having clear referencing and clarifications.

To be able to serve the learners as mentioned by Mays above, COL (2005:62) has put forward some basic principles for sequencing of the subject matters or lessons while developing a course for distance learners [it can work for conventional students, too]. It advises CW to follow one or more of the following four basic patterns (sequences) whenever they plan to write for distance learners: to move from simple to complex; to move from the known to the unknown; to move from the particular to the general; or to move from the concrete to the abstract.

I tried to cover everything that is important while writing SIM for distance learners. One core attribute of a SIM is that it talks to the reader/learner assuming that they are actively engaged in their learning. Moore and Anderson (2003:277) identified this connectedness and explained that the content or the subject matter of a course in SIM should be written in such a way that the interaction between the student and the content is stated in dialogue form as it enables the learner to hear their instructor's voice [in developing a link virtually with their instructor.] They further stated that this approach also provides rooms for the distance instructor to bring themselves into the course and goes beyond the simple presentation of content.

IGNOU (2005:49) has also been working in line with those discussed above and train CW to be aware of the following seven considerations: i) to write in small steps; ii) to keep logical arrangement of lessons; iii) to order the contents from simple to complex; iv) to write in personalised style; v) to use simple language; vi) to provide illustrations for whatever type of pictures/diagrams or abstractions are available; and vii) to provide self- checking assessments.

16. The outline (usually called as the contents)

The content outline shows what the students are expected to learn to meet the aims and objective. It is a list of specific main topics and sub-topics, which for a modularised course can be presented under the module headings. It can also be a diagram illustrating the relationship between major concepts (Murphy, 2000:4)

The structure with itemised sections and sub-sections should be incorporated in the SIM in order of the occurrence of the content in the material. In my view, the structure draws the learner's attention to the subject matter and to make the study materials more accessible for self-learning, a list of the teaching items is presented at the beginning of the course/module/unit. Such a list helps the distance learner to recognise the constituents of the course/module/unit.

It is quite normal that a textbook has only one 'table of contents' for the whole course. However, every unit in the course should have a list. At IGNOU, the 'structure' of a unit highlights the content break down into sections and sub-sections. It is made to display the structural relationships existing among the parts within the content.

Serving as an access device in the SIM, the structure makes the study material more accessible to the learners. The SIM with structures built in, enable distance learners to have easy access to the required content of the unit. I went through this mode of learning for my master's degree and am a witness to such experience. I did not need turn page after page to find the desired learning point. It is clearly stated by IGNOU that the structure presents a clear outline of how the content has been conceptualised by the course writer – what they consider to be the main themes, the sub-themes and sub-sub-themes and the logical linkages between them. A structure highlights to a learner how their distance instructor visualises the content. (IGNOU, 2005:36).

COL (2005: 229-230) posited that the content addresses the points contained in the materials assuming their appropriateness and the level of the target audience. The issues are described as a course description, a list of prerequisite knowledge and skills, a set of aims, a set of learning outcomes, and a draft final assessment. The COL stresses that the more these devices are used, the more precise the description of the content will be.

As learned from the detailed discussion under this section, and the two examples of content outlines, IGNOU uses the content outline which it calls structure, as one of the basic access

devices to guide a distance learner on all the necessary activities they are required to do to be successful in their learning.

- Best practices learned

I found that IGNOU provides training to CW and editors to the level required for the task before engaging in the actual course development and prepares, on average four to five modules/blocks per course. Similarly, each block/module is prepared in such a way that it satisfies most of the characteristics of SIM. Additionally, each block/module is designed to be manageable, fostering learner engagement and motivation to read. This approach also enhances the learner's confidence in their ability to successfully complete the entire course, facilitated by the systematic and comprehensive closure of each module.

3.5.3 Experience of Unisa

As shown on its web site, the University of South Africa, Unisa, is a second-generation university being the immediate successor of the first university, the University of the Cape of Good Hope (UCGH) in South Africa. UCGH was established in 1873 by an act of the Cape Colony's Parliament and was modelled on the UoL, which was made only to set academic standards and examinations for associated 'university colleges. In 1910, when a central government was ruling the country, UCGH was authorised to monitor university colleges across the country. Unisa received its name in 1916 and relocated to Pretoria in 1918. It was given the mandate to serve as an examination centre for many of the institutions that were transformed into universities in South Africa. It was in 1946, when almost all institutions were liberated and became independent, Unisa began offering "postal tuition". Unisa became the first government higher institution in the world to pioneer and teach exclusively via DE. Since then, it has grown into one of the world's largest DL institutions, and the largest one in South Africa (enrolling one-third of the country's students) with more than 400 000 students, in some 130 countries. The rising number of students has made it into one of the 11 mega-distance teaching universities in the world.

Unisa has contributed greatly to the provision of quality university education to those who were deprived of the access to learning from the conventional institutions during apartheid years. Throughout the years, according to the statement on its web page, Unisa was thought to be the only institution to have addressed the interests of the people in learning regardless of who they are, where they come from, their skin colour and what beliefs they have. These characteristics are reflected in its rich history, more particularly by the massive and impressive database of

alumni, many of whom are found serving the community around the world at high levels in governmental and non-governmental organisations. Unisa, in coining the motto: “Define tomorrow” is nurturing leaders of the future in providing reputable, comprehensive, flexible and accessible education through an ODL platform. Unisa offers internationally accredited qualifications through creating access to world-class resources.

It is so said that the history of Unisa goes along with the history of South Africa as its history spans the entire modern history of South Africa, with its shifts from colonialism into apartheid and then democracy. Throughout, Unisa has mirrored the country’s traditions and upheld successive state ideologies although it opened the world of academic learning to opponents of the state – most famously, Nelson Mandela. Given the fact that Unisa has been rooted in the African continent and having seen years building Africa’s future for more than 145 years, Unisa today can truly claim to be an African university in the service of humanity.

As clearly stated in its vision statement, Unisa is working towards becoming the African University that shapes the futures of Africans in the service of humanity through finding answers to educational and developmental problems of Africa. This is achieved by forming partnerships in Africa and throughout the world. By the same token, to realise its vision, Unisa has devised a strategy that can accelerate the accomplishment of its three core business areas: teaching, research and community engagement.

As clearly mentioned on its web site, Unisa follows an ODL model of teaching and offers an unparalleled range of study choices. It also carries research as its second core area of business, which is spearheaded by the Research, Postgraduate Studies, Innovation and Commercialisation Portfolio. Regarding the third core area of business, community engagement and outreach services, Unisa remains mindful of its significant role in building ongoing relationships with the community. It also values African arts and culture through celebrations and promotions besides academic affairs.

Unisa dreams, in the upcoming years, to harness the new and emerging potential in ICT to catapult the university into a truly digital future so that it can take the distance out of DL (Manson, 2018:266).

As one of the leading research institutions on the continent, its research efforts have led to international recognition, numerous awards and honours. These enable it to contribute significantly to the transformation of the South African HE landscape and are the main points that

motivated me to study this organisation. Unisa boasts an annual success story of nearly 50,000 graduates achieving certificates, diplomas, and degrees (UNISA, 2019). The university offers over 500 qualifications (UNISA, 2023a) and provides services through a dedicated team of over 7,000 staff members (UNISA, 2023b).

To wrap up the reflection I learned from its web site updated in January 2021, Unisa has more than 700 000 alumni members and has created strategic partnerships both in Africa and internationally to be able to support human capacity building for governments, public and private institutions and institutions of higher learning. It also promotes mutually beneficial and sustainable partnerships worldwide and contributes to the development of HE with emphasis on ODL.

3.5.4 A Reflection on Experiences learned from Unisa's SIM

1. Course breakdown into modular forms

I analysed the study guides, tutorial letters and some prescribed books of five courses that distance learners are supposed to read and internalise to successfully complete their programmes of study. The courses were: 1. Performance Management from the department of Human Resource Management; 2. Financial Management from the department of Finance, Risk, Management and Banking; 3. Sustainability and Greed from College of Economic and Management Sciences (CEMS); 4. Strategic Planning; and 5. Strategic Implementation and Control from the department of Business Management. This project focused on evaluating the quality of the SIM of management courses of ODL universities in Ethiopia.

Every course has been described as a modular package and there are on average six interrelated units (in some of them, described as workbooks, learning units and study units) in a module.

2. Nature and purposes of the course/module/unit introduction

I found that the course introductions provided for the modular courses outline what is expected of learners to succeed in the upcoming module. These introductions offer a comprehensive understanding of the module's content, its division into study units or workbooks, and its overall structure. Each introduction emphasises the dynamic and engaging nature of the module, underscoring its importance as a prerequisite for subsequent modules. Similarly, the introductions to study units, learning units or workbooks are meticulously organised. They delve into the depth of the subject matter, highlight its practical relevance and establish connections with upcoming topics. Drawing from the literature review discussed in Section 3.5.1 which outlined the essential

elements of a well-structured introduction, the modules (study guides) are carefully crafted to incorporate the three vital components of an introduction: structural, thematic, and guidance elements.

3. Nature and purposes of the course/module/unit objectives

In five of the modules that I analysed, the statements of objectives, expressed as learning outcomes, have been included both for the modules and the learning units/workbooks. Module objectives are formulated with a high expectation of the learner's advanced comprehension, whereas unit objectives are written with explicit behavioural terms to facilitate the development of conceptual understanding and critical analysis. This approach enables learners to undergo attitudinal shifts as they engage with the material.

Referring to the review made under Section 3.5.1 which discusses the 'what' and 'why' of including objectives as an access device into the SIM and capitalises on the fact that those objectives guide the learners and their instructors in their learning and teaching, the modules satisfy the requirements described by the educational experts. I believe that Unisa's ODL learners receive essential support through their learning materials, which significantly minimise the uncertainties they might encounter and their need to frequently seek guidance from their instructors.

4. The time required to successfully complete the study of the course/modules

Five of the modules this study reviewed explained to the learner the time they should spend to successfully complete their learning of the course. The study guides state that the student will need to spend at least 120 hours on a module dividing the time approximately as: 40 hours of reading and studying the learning material, 40 hours doing the activities and assignments and 40 hours preparing for the examination. The learner is also provided with a study plan to organise their study for semesters 1 and 2 which is enclosed in their Tutorial Letter. Thus, students of Unisa are directed to schedule their work and focus on their studies to become successful in their endeavours.

5. The size of the modules, and fonts used

Except for the module (study guide) for Financial Management which is 44 pages in length and is the one with a smaller number of pages, the size of the remaining four modules (study guides) extends from 114–149 pages. The study guides (modules) are manageable, and the spacing between lines of texts (1.5) is a standard one and the text is written in size 12 Arial font. The

contents are mostly presented in a readable and motivating style which shows that the normal and required approaches are addressed.

6. The binding style and the colour of the cover pages

I managed to get only soft copies of five of the modules mentioned above under Section 3.5.2 together with their tutorial letters and some prescribed books. It is therefore not possible to discuss about the hard copies. It can be, however, said that the colours of the user interface that a learner visits to read from the screen are mostly attractive and motivate one to learn.

7. The fonts used to represent the different structures of the content

All the fonts used throughout the modules prepared by a given department are the same. Of the five modules, the two prepared by the department of Business Management used the Arial font, with different sizes for the title of the unit, sections, and sub-sections written in bold typeface to make it easier for the learner to see their places within the module. For purposes of uniformity, every unit was partitioned similarly throughout the module. The other three modules used different fonts and each of them was uniform in its specific department. In addition, the contents of the modules were readable and guided the learner through their reading materials.

8. Nature and purposes of the in-text/activities/discussion questions

There were in-text questions (described as activities and discussion questions) included in every study unit/learning unit. On average, four sets of activities were included per unit of the module, and they motivated the learner to check their progress. There were also discussion questions placed at the end of each unit of a module to assess the learner's understanding of the content covered in the unit. The activity questions were indented for easy reference. The study guide advised the learner to attempt all the activity and discussion questions and to have a look at the feedback given to them in the module to check their responses and thus take responsibility for their progress. The learner was also informed that both the activities and discussion questions were meant to encourage them to keep studying until the end of the module and prepare themselves for final examinations and were not intended for submission/grading purposes.

9. Nature and purposes of the feedback given to questions/activities

Except for the module, Sustainability and Greed, the remaining four modules contained feedback on the activities in each unit. Feedback was provided exactly after the activity questions. The

feedback was given in such a way that they promoted students' learning through providing praise for the correct responses and corrections for the possible mistakes a student might make because of misunderstanding that could arise from a lack of focus while reading through the modules.

In accordance with the summarised literature review in Section 3.5.2, "Without such feedback, learning does not typically occur", I found that except for one module, the remaining four modules satisfied the requirements described by the educational experts. It is widely believed that ODL learners, especially those enrolled in departments that emphasise feedback – a crucial element of SIM and a primary means of motivating distance learners – whether through tutor comments on assignments or responses to their queries within the SIM, achieve optimal learning outcomes and experience success in completing their studies (COL, 2005:100).

10. Nature and purposes of summaries provided for units

I inspected five modules mentioned above and found that all included unit summaries and each summary revised the main topics discussed under each unit and reminded the student of the importance of working on the activities and discussion questions. The summaries also encourage the learner to refer to the feedback to get confirmation for correct responses and to correct wrong ones in revising topics where there were misunderstandings. The unit summaries also informed the learner about the forthcoming unit and the link existing between them. The unit summaries were placed at the end of the units before the discussion questions.

Gaining insight from the analysis presented in Section 3.5.2 that delves into the advantages of incorporating a unit summary into SIM, and harnessing the dual benefits described by IGNOU (2005:65) as "recapitulating the main learning points and reinforcing the motivation of the learner for learning as it builds a capacity of the learner to manage their learning without much support from others", I am firmly convinced that ODL students who pursue their studies through Unisa's departments featuring module unit summaries can successfully orient themselves, as these summaries serve as a valuable resource to guide their engagement with the learning material (COL, 2005:111).

11. Nature and purposes of glossaries provided to explain technical terms included in the texts

As discussed in Section 3.5.1, a glossary of terms used in the SIM across the units provides a helpful reference tool for learners. As an important access device, a glossary consists of a list of specific vocabulary that needs special attention.

Though its inclusion into the SIM is debatable, the key words which are thought to be difficult to understand and may be ambiguous should be listed so that the learner will be able to get an explanation and working definitions of all new concepts introduced in a unit. A glossary of terms may be incorporated at the end of a unit, or at the back of the module or it may be published as a separate item.

As an expert in DE and a growing scholar in the field of ODL, I regard the glossary as a supportive device in that it refreshes and clarifies the learners' comprehension. However, some of the modules covered in this review did not have a glossary of terms but included a list of key concepts to pinpoint their significance in each unit without providing their definitions. I believe that the quality of the SIM could have been better even more if glossaries had been incorporated as the support distance learners get from them is indispensable.

12. Nature and purposes of the Icons included in the modules

Here too, except for the module, Sustainability and Greed, the remaining four modules used icons for different tasks that an ODL learner should do to successfully complete their studies. The icons were defined as to what they represented before the learner progressed very far into the SIM. The review showed that each department used its own icons to flag features of activities. The icon for 'Study', for example, was represented by three different icons. However, uniformity was maintained within the units of a module.

In agreement with the summarised literature review in section 3.5.1 and based on the guidelines proposed by COL and ADB (1999:158), icons are described as visual symbols resembling the concepts, they represent in the learning materials. These icons serve as signposts that direct learners to the specific activities they need to undertake. I believe that ODL learners who receive modular materials or study guides incorporating icons benefit significantly. This inclusion of icons reduces their frequent requests for explanations regarding the types of tasks they are required to engage with in the SIM.

13. The house style or inhouse structure kept by the modules/blocks

Referring to Section 3.5.1, which discusses the importance of an educational institution "establishing a consistent house style in an ODL material contributes to the implementation of quality assurance" (COL & ADB; 1999:169), this study found that five modules maintained uniform access devices. The only exception was the module Sustainability and Greed. It is this consistency across the units of a module and if possible, across the departments and colleges

that constitute a house style. I, thus, believe that anyone who comes across set of modules from a given school of thought or department may be able to see that it is produced by Unisa or a department within the university.

14. Naming of the modules and their codes

Five of the modules, each describing a full course, had printed on their 'cover pages' or first pages their titles, codes, the name of the department, the name and logo of the university, and a diagram representing the content of the module. However, Sustainability and Greed did not use this technique.

15. The content (the presentation/subject matter)

None of the modules/study guides this study reviewed could stand alone for successful completion of learning in a specific discipline. There were also prescribed books and tutorial letters identified for the learner to read some units or chapters from and attempt specified questions or exercises to be able to answer all the questions set for the final examinations.

Except for the prescribed books which were written for conventional schools and only conveyed the required subject matter or content to the reader, the learning guides and tutorial letters put the learner at the centre. The approach was learner-friendly and the interaction they have with the content was set out as a dialogue to enable the learner to hear their instructor's voice [in developing a link virtually with his instructor] (Moore & Anderson, 2003: 277).

Referring to the summarised literature review made under Section 3.5.1 regarding the core attributes/features that ODL materials/SIM comprise of, I support May's (1998:9,55-56) discussion. According to Mays, SIM should arouse students' attention and the way the content/subject matter is presented should be done in such a way that it fulfils the need of the learner; exploits the previous experiences of the learner; uses a personalised style in presenting information; sets interesting and enjoyable exercises; provides reinforcement and feedback at every stage of learning; presents assignments in the order moving from easier to more difficult; and the study units should be of moderate length. They should also be supported with pictures and diagrams having clear referencing and clarifications.

In my review of the five modules, I learned that the modules satisfied the requirements described by the ODL experts. It is believed that ODL learners registered with these departments would

enjoy their learning as they were encouraged to engage both with the content and with their instructors and would likely be successful in completing their studies.

16. The outline (usually called as the contents)

Five of the modules/study guides that this study scrutinised used the term content synonymously to describe the outlines of the module being specified with corresponding page numbers. All the required reading materials were tabulated and were placed on the page immediately following the page with the name of the module and its code.

The summarised literature review made under Section 3.5.1 emphasises the description given to it by STRIDE, namely, that "...the structure draws the learner's attention to the subject matter and to make the study materials more accessible for self-learning" (IGNOU, 2005:20). This study found that five of the modules guided the learner to work out what was expected of them throughout the learning packages and thereby achieve the required learning objectives proposed by the CW.

- Best practices learned

According to the observation made on the five modules, only one of them (Financial Management) described the aims of the module and identifies a checklist that consisted of set of questions meant to confirm that all learning outcomes had been achieved and that the learner was ready for the assessment. Similarly, only the module Sustainability and Greed guided the learner where to begin their study with the phrase "Start Here" and provided a template for a semester plan to the learner. In two modules, Strategic Planning and Strategic Implementation and Control, which were prepared by the Department of Business Management, access devices that described the responsibilities of both the learner and Unisa were organised in alignment with the stated learning outcomes.

I appreciate that if all the best practices I learned from each of the modules were applied, revitalised and put together, this would result in the production of excellent SIM.

3.6 CHAPTER SUMMARY

The main concern of Chapter 3 was reflecting how the quality and characteristics of ODL materials have been understood globally. The chapter started with a discussion of the development of theories of ODL in which seven theorists who are believed to be at the frontier of the discipline

were mentioned and their theories were discussed showing the concern that each theorist regarded as the defining tenet of DE. As it was mentioned earlier, the focus of this chapter was the experiences of some developed countries, UK, United States of America and China in managing the system of ODE. The countries were chosen based on their leading history and development of ODL (learning management system and enrolment increase), in their endeavour to organise and structure the system so as to address the needs and circumstances of their respective national HE systems. Their experiences were assumed to serve as examples, especially for developing countries like Ethiopia. Five of the characteristics of self-learning materials were discussed following the principles that a distance instructor should apply in preparing SIM that can promote independent learning. The chapter ended with a discussion of what the SIM of two open universities: IGNOU and Unisa look like and highlighted the best practices used in developing them. The next chapter discusses the philosophical underpinnings, research paradigms, methodology and the research design adopted in this study. Moreover, it explains why mixed methods research was considered convenient to carry out the study and the techniques used in data collection.

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

In Chapters 2 and 3, this thesis presented the literature reviews that discussed in detail the quality and characteristics of ODL materials being used by higher educational institutions. Chapter 2 discussed about the historical background for the development of DE in Ethiopia and Africa through associating its roots to African indigenous practices. The two most suitable theoretical frameworks, Moore's theory of transactional distance and the constructive theory of learning, were discussed in terms of how they could be used to describe ODE and how its components, especially of the print-based modular learning materials, should be designed to promote self-learning. Chapter 2 also mentioned the importance of securing quality learning materials through satisfying the required features that define quality of services in the context of HE. Chapter 3 reviewed literature that explored the global dimensions of the quality and characteristics of ODL materials. It began by discussing the development of theories of ODL. The experiences from countries where the system of ODE has deep roots were discussed. The UK, the USA and China were the choices for this thesis for their wider and highly developed use of ODL in their education systems. Regarding the development of quality DL materials, experiences of Indira Gandhi National Open University (IGNOU) and Unisa were highlighted in brief.

This chapter discusses the core structures of social science research: its design and the methodology applied in the study. The philosophical orientation, pragmatism, wherein this study is embedded is described in relation to the methodology used. What mixed methods research design is and why it was adopted for this study is discussed with all procedures executed for data collection and analysis purposes. This chapter also addresses the measures taken to secure the validity and reliability of the study adhering to the ethics of scientific research and winds up the topic by highlighting the delimitation and the scope and the limitations of the study.

4.2 RESEARCH PARADIGM AS A PHILOSOPHICAL ORIENTATION

According to Burrell and Morgan (1979:1), whether they are consciously aware of them or not, every researcher makes some assumptions at every stage of the research. These involve assumptions about the realities one encounters in one's research (ontological assumptions), assumptions about human knowledge (epistemological assumptions), and the extent and ways the researcher's values influence their research process (axiological assumptions). A thorough investigation of the readings of Crotty (1998:17) shows that such philosophical assumptions

without doubt shape how we understand our research questions, the methods we use and how we interpret our findings. Crotty further argued that a robust and reliable set of assumptions will establish a credible research philosophy which will underpin methodological choice, research strategy, data-collection techniques and analysis procedures. In my view, a well-organised philosophical approach enabled me to design a coherent research project, in which all elements of research were systematically intertwined together.

Lincoln and Denzin (2018:56) described the term “paradigm”, in social research, as the philosophical assumptions or the basic set of beliefs that direct the actions and describe the worldview of the researcher. It was Kuhn (1970:10) who introduced the term paradigm for the first time to discuss the shared generalisations, beliefs and values of a community of specialists regarding the nature of reality and knowledge. A worldview, according to Patton (2002: 69), is “a way of thinking about and making sense of the complexities of the real world”. All the known paradigms or worldviews that structure and organise modern social work research (e.g., post positivism, constructivism, participatory action frameworks, or pragmatism) are essentially philosophical in nature and encompass the following common elements, describing them of course from different perspectives: axiology – beliefs about the role of values and morals in research; ontology – assumptions about the nature of reality; epistemology – assumptions about how we know the world, how we gain knowledge, the relationship between the knower and the known; methodology – shared understanding of best means for gaining knowledge about the world; and rhetoric – shared understanding of the language of research (Creswell, 2009:37; Lincoln & Denzin, 2018:195).

Table 4.1 summarises the five worldviews (paradigms) that guide researchers in shaping their philosophical assumptions during the study. These paradigms influence the study’s approach and objectives. The table clarifies the ontological description of inquiries, their epistemological dimensions, the researcher’s values and axiological attitude, and the methods used for conducting research. I set out to verify whether the ODL materials used by the selected HEI in Ethiopia satisfy the minimum criteria to be qualified as SIM and hence serve for self-learning. I, thus, sought to answer these three questions which have ontological, epistemological and axiological orientations respectively:

1. What characteristics of ODL are the materials of the universities selected for the purpose exhibiting?
2. What type of ODL professional development did the writers of the DL materials take?

3. How should the opinions of the respondents be captured and reported?

Table 4.1: Comparison of five research philosophies on approaches to knowledge acquisition

Ontology (Nature of reality or being)	Epistemology (What constitutes acceptable knowledge)	Axiology (Role of values)	Typical methods
Positivism			
1. Real, external, independent. 2. One true reality (universalism) 3. Granular (things) 4. Ordered	5. Scientific method 6. Observable and measurable facts 7. Law-like generalisations 8. Numbers 9. Causal explanation and prediction as contribution	10. Value-free research 11. Researcher is detached, neutral and independent of what is researched 12. Researcher maintains objective stance	13. Typically deductive 14. Highly structured 15. Large samples 16. Measurement 17. Typically quantitative methods of analysis, but a range of data can be analysed
Critical realism			
1. Stratified/layered (the empirical, the actual and thereal) 2. External 3. Independent 4. Intransient 5. Objective structures 6. Causal mechanisms	7. Epistemological relativism 8. Knowledge historically situated and transient 9. Facts are social constructions 10. Historical causal explanation as contribution	11. Value-laden research 12. Researcher acknowledges bias by worldviews, cultural experience and upbringing 13. Researcher tries to minimise bias and errors	15. Retroductive, 16. In-depth, 17. Historically situated analysis of pre-existing structures and emerging agency. 18. Range of methods and data types to fit subject matter

		14. Researcher is as objective as possible	
Interpretivism			
1. Complex, rich 2. Socially constructed through culture and language	1. Theories and concepts too simplistic	1. Value-bound research 2. Researchers are part of what is researched, subjective	1. Typically inductive. 2. Small samples, 3. in-depth investigations,
3. Multiple meanings, interpretations, realities 4. Flux of processes, experiences, practices	2. Focus on narratives, stories, perceptions and interpretations 3. New understandings and worldviews as contribution	3. Researcher interpretations key to contribution 4. Researcher reflexive	4. qualitative methods of analysis, but a range of data can be interpreted
Postmodernism			
1. Nominal 2. Complex 3. Rich 4. Socially constructed through power relations 5. Some meanings, interpretations, realities are dominated and silenced by others	1. What counts as 'truth' and 'knowledge' is decided by dominant ideologies 2. Focus on absences, silences and oppressed/repressed meanings, interpretations and voices	1. Value-constituted research 2. Researcher and research embedded in power relations 3. Some research narratives are repressed and silenced at the expense of others	1. Typically deconstructive – reading texts and realities against themselves 2. In-depth investigations of anomalies, silences and absences 3. Range of data types, typically qualitative

6. Flux of processes, experiences, practices	3. Exposure of power relations and challenge of dominant views as contribution	4. Researcher radically reflexive	methods of analysis
Pragmatism			
1. Complex, rich, external 2. 'Reality' is the practical consequences of ideas. 3. Flux of processes, experiences and practices	1. Practical meaning of knowledge in specific contexts 1. 'True' theories and knowledge are those that enable successful action 2. Focus on problems, practices and relevance 3. Problem-solving and informed future practice as contribution	1. Value-driven research initiated and sustained by researcher's doubts and beliefs 2. Researcher reflexive	1. Following research problem and research question 2. Range of methods: mixed, multiple, qualitative, quantitative, action research 3. Emphasis on practical solutions and outcomes

(Source: Saunders et al. 2009:135)

Grix (2004:59) compared ontology and epistemology with the foundations of a house as they form the foundations of the whole edifice of research. Grix further posited that for the study to be fully recognised, it should define answerable epistemological questions. Once the ontological belief system (explicitly or implicitly) is identified, it is important to adhere to it as it guides a researcher to certain epistemological assumptions.

Gall et al. (2003:13) describe epistemology as “the branch of philosophy that studies the nature of knowledge and the process by which knowledge is acquired and validated”. And according to Cohen et al. (2007:7), it is concerned with “the nature and forms [of knowledge], how it can be acquired and communicated to other human beings”. Patton (2002:134) stated that the

epistemological questions direct a researcher to debate “the possibility and desirability of objectivity, subjectivity, causality, validity, [and] generalisability” of research.

As this study calls for a pragmatist orientation and knowing that the major underpinning of pragmatist epistemology always refers knowledge as being based on experience, I believe that my perceptions of the world are influenced by the experiences I had in the social setup. I concur with the thought that depicts “Each person’s knowledge is unique as it is created by their unique experiences. Nevertheless, much of this knowledge is socially shared as it is created from socially shared experiences” Morgan (2014a:1049). Morgan added that “All knowledge is social knowledge” and, according to Goldkuhl (2012: 92), it is formulated with a purpose to better manage one’s existence and to take part in the world.

Having been an expert in DE at some of the universities which were chosen for this study and served both as a senior editor and trainer for the CW, I maintain that properly developed SIM encourage self-learning which calls for skills specially tailored for ODL material development.

I collected reflections of ODL learners, coordinators, and CW to determine the level of the quality of their learning modules and carried out document analysis using tested rubrics to triangulate the findings. I am sure the findings of this study will make significant contribution to the body of knowledge in the field of ODL and more specifically to MoE to establish a monitoring and evaluation system to control and guide the ways ODL materials are prepared.

As has been made clear in different sections of this thesis, this study was situated within the pragmatist paradigm or school of thought where the mixed method approach was considered the right methodology to gather evidence from the participants of the research. Chaumba (2013:308) stressed that mixed method research allows for comprehensive analyses of phenomena as it enhances the validity of the finding by reducing the weaknesses of using either quantitative method or qualitative method alone. I believed that the evaluative study made on the effectiveness of the SIM used by the universities chosen for this purpose would guide the stakeholders and specially the MoE to monitor the quality of ODL materials and to understand the existing problems that distance learners, CW and programmes coordinators experienced while in carrying out their respective responsibilities in the system.

Knowledge is discovered and described by individuals and hence is situated within the subjective epistemology (Scotland, 2012:12). I intended to find out the prevailing difficulties that ODL students experienced while learning using their ODL packages and those faced by the CW and

coordinators. These subjective experiences of the students, CW and coordinators required me to establish and use open-ended questions to gather data. This required making an ontological assumption and led to the use of the interpretive paradigm. Scotland (2012:12) posited that “Researchers need to take a position regarding their perceptions of how things really are and how things work.” This thesis conveys all the experiences as reflected by the respondents.

Saunders et al. (2009:135) portrayed epistemological questions as “How can we know what we know? What is considered acceptable knowledge? What constitutes good-quality data? What kinds of contribution to knowledge can be made?” Similarly, according to Antwi and Kasim (2015: 219), epistemology seeks answers to the following questions: “What is the relationship between the knower and what is known? And what counts as knowledge?”

Having served as a course writer for DE and trainer for CW, I realised that the ODL modules were supposed to be prepared in such a way that they would satisfy the minimum requirements to qualify for SIM and serve for self-learning. Epistemologically, I was, thus, convinced to assume an objective stance and be involved axiologically, i.e., to have a value-free posture towards the reality experienced by the participants in the study. This meant that I needed to attempt to explain the kind of relationships (effect brought about) found between the independent variable (the quality of the SIM) and dependent variables (like design of the modules, writing style, access devices, advance organisers, etc.) quantitatively. Burrell and Morgan (1979:1) and Scotland (2012:12) maintained that epistemological assumptions are concerned with what it means to know, i.e., the how of the creation, acquisition and communication of knowledge to others.

The reader of this research report will hopefully grasp my rationale for selecting the mixed method design. This choice is rooted in the ontological and epistemological aspects highlighted earlier, aligned with a pragmatic belief. The methodology used effectively derived meaningful insights from the data.

As an expert in material development for distance learners, especially of modular material preparation, I set out to determine the best practice in designing ODL materials with all the required characteristics that could enable them to qualify as SIM and hence serve for self-learning. The study tried to be inclusive; it encompassed universities from the government and private sectors and scrutinised and contrasted the reflections of students, CW and programme coordinators of the respective institutions. This was regarded as imperative for better understanding of the questions proposed for investigation.

4.3 RESEARCH DESIGN

As highlighted in Chapter 1, Kumar (2011:96) described a research design as a procedural plan adopted by the researcher to answer research questions validly, objectively, accurately and economically. Creswell (2009:23) concurred with Kumar and depicted research design “as a plan or proposal to conduct research, [which] involves the intersection of philosophy, strategies of inquiries and specific methods”. To reiterate Creswell's intention, it is crucial to recognise that every researcher, during study planning, must align with a philosophical worldview. This choice dictates the inquiry strategy closely linked to the selected worldview, as well as the specific research methods that put the approach into action. To put it operationally, paradigms (worldviews) direct the formulation of research questions, dictate how appropriate methods are chosen to address the research questions and determine the way data should be interpreted (Aliyu, Bello, Kasim & Martin, 2014:80; Bryman, 2006:630).

It has been noted that the main research objective was to evaluate the quality of ODL materials used by selected HEI of Ethiopia and in my view, a mixed method approach, in which more attention is given to the quantitative method, could lead to acceptable answers. In the following section, a discussion is provided on mixed research methods in detail and in a tabular summary, the differences between the three research strategies, namely, quantitative, qualitative and mixed, are highlighted.

4.3.1 Mixed Methods

Tashakkori and Teddlie (2010b: 803-804) state that mixed methods research has acquired a formal methodology subscribed to by an emerging community of practitioners and methodologists across the disciplines acknowledging that it did not exist before. The same authors mentioned it as the de facto third alternative, or “third methodological movement” being in the process of getting its own distinct identity in the social and human sciences and has been evolving for 30 years since the so-called ‘paradigm wars’ of the 1980s.

Clearly, no research method is complete in its own right and all methods have limitations. Researchers felt that biases inherent in any single method could neutralise or cancel the biases of other methods. Jick (1979:608) suggested the birth of triangulating data sources – a means for seeking convergence across qualitative and quantitative methods – as one of the approaches for neutralising biases of either a qual or quant method. And as time went by, early in 1990s, mixed methods grew from looking for convergence, i.e., triangulation, to combining or joining the

quantitative and qualitative data. According to Blanche and Kelly (1999:126), triangulation helps researchers to “home in’ on a correct understanding of a phenomenon by approaching it from several different angles”. This is strengthened by Creswell and Plano (2018:50) in stating that quantitative data-collection tools used alone may not give sufficient regard to cultural context or beliefs. I, thus, understand the need for triangulation of data sources as being a highly recommended technique in mixed methods research.

Cameron (2011:96) defined mixed methods as “research in which the investigator collects, analyses, mixes, and draws inferences from both quantitative and qualitative data in a single study or a programme of inquiry”. In the same article, Creswell and Plano Clark (2007) were mentioned for comprehensive definition they gave in their work on mixed methods. They defined it as:

Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative data in a single study or series of studies.

Careful analysis of the definition reflected that researchers should better combine quantitative and qualitative approaches (qual and quant, for short) to properly understand the research problems that either approach alone might not do. Therefore, integrating both qual and quant research methods should improve a study’s findings.

Although mixed methods research has developed rapidly during the last decade, justification for using this method still needs to be provided. Extended indicators for reasons and rationalisation to use MM were provided for the first time by Bryman (2006:106) in furthering those introduced by Greene, Caracelli and Graham (1989:259).

According to Bryman, MM is used:

1. To triangulate the result. By using both quantitative and qualitative methods the researcher will be able to determine how the results from different methods correspond with each other. This will improve overall validity of the research and allow the researcher to cross-examine data provided by different stakeholders. Moreover, using mixed methods will also improve credibility (Bryman, 2006:106) of the research, as using the two strands will add to the integrity of findings as well as validate the data, e.g., closed-ended questions with data provided in the open-ended questions.

2. To complement the justification: which relates to “elaboration, enhancement, illustration, clarification of the results from one method with the results from another” (Greene et al., 1989:259) and completeness – (Bryman, 2006:106) – “refers to the notion that the researcher can bring together a more comprehensive account of the area of enquiry in which he or she is interested if both quantitative and qualitative research are used”. The researcher will be able to see a full picture of the researched issues as each group of stakeholders who responded to the research questions would have their unique view on the researched topic.
3. To develop thoughts: “seeks to use the results from one method to help develop or inform the other method, where development is broadly construed to include sampling and implementation, as well as measurement decisions” (Greene et al., 1989: 259).
4. To initiate new perspectives: According to Greene et al. (1989: 259), mixed methods research aims to unveil paradoxes, contradictions and new perspectives. This approach, as described by Bryman (2006:106), also involves unexpected outcomes, wherein quantitative and qualitative research synergistically combine to interpret surprising findings from either method. Similarly, as with complementarity, different stakeholders may hold different views; hence, a paradox or contradiction may be encountered. Moreover, qualitative and quantitative data within one group can show different results.
5. To expand the enquiry: “seeks to extend the breadth and range of enquiry by using different methods for different inquiry components” (Greene et al., 1989:259) to see the fullest possible picture of what is being researched. By using mixed methods, the researcher can collect a considerable amount of data to be able to find patterns and attempt to generalise (Bryman, 2006:106). MM also allow for context analysis which “refers to cases in which the combination is rationalised in terms of qualitative research providing contextual understanding coupled with either generalisable, externally valid findings or broad relationships among variables uncovered through a survey”.
6. To use results (Bryman, 2006:106): which refers to improving the usefulness of findings. Using two strands and allowing greater data collection will allow the research findings to be more useful. The variety of perspectives, and the wholeness of findings will allow for better understanding of issues that are of concern of each group of participants.

7. To offset shortcomings (Bryman, 2006:106): states that both quantitative and qualitative research have strengths and weaknesses. Combining the two allows the researcher to offset their weaknesses and draw on the strengths of both. Qualitative research allows the researcher to have close access to participants, and therefore, an insider's view to the researched community. The researcher has a better chance of understanding the complexities behind participants' responses and can notice nuances in their behaviours when conducting interviews, observing and interacting with different stakeholders, and getting background information. However, the results cannot be verified objectively. Therefore, to ensure reliability and validity, the quantitative approach is used. Moreover, the qualitative procedures are time-consuming; both during the process of data collection and analysis. Quantitative research's main strength is the ability to replicate the research and generalise the findings.

This study used a concurrent triangulation mixed methods strategy and extracted a complete understanding of the phenomenon from both qualitative and quantitative perspectives.

As previously mentioned, I concluded that incorporating both qualitative and quantitative methods in this project would enhance my comprehension of the research issue outlined in the research proposal. My decision to employ mixed methods was driven by the belief that it mitigates the limitations of individual qualitative or quantitative methods, thereby allowing for a more comprehensive and enriched interpretation. In so doing, it was the aim of this study to find out whether the DL materials used by the proposed institutions could be used as SIM and encourage distance learners to learn independently. It was also expected to describe the challenges faced by the coordinators of the programmes and those who took part in the preparation of DL materials.

Finally, triangulating the results gave me not only room for in-depth understanding of the challenges experienced by distance learners in relation to the DL materials, but also the challenges of those who prepared the DL materials and coordinators who managed the programmes. It also enabled me to devise a model intended to serve as a gauge for the designing and development of SIM for distance learners. At the same time, the model should direct institutions on how SIM might be prepared and by whom and what minimum requirements coordinators should satisfy to effectively lead the programmes keeping the interests and level of comprehension of distance learners at the centre.

As discussed in different sections of this thesis, I believed that the chosen research design was fit-for-purpose in addressing the research aim: evaluating the quality of DL materials used by

selected HEI of Ethiopia. The study, thus, invited second to final year students and CW to take part in the study and reflect on their lived experiences. A structured and deductive approach was used which led to the use of a descriptive survey. This approach involved the manipulation of quantitative methods to assess the effectiveness of distance students' use of DL materials for fostering independent learning. Additionally, it aimed to gauge the extent of professional development skills acquired by CW in creating the DL materials. As previously discussed in the rationale for using mixed methods (Bryman, 2006:106), the outcomes derived from the quantitative method were also used to interpret data collected through the document analysis approach. This approach contributed to the formulation of an enhanced model suitable for the development of SIM.

4.4 RESEARCH METHODS

Education, according to the definition of The Royal Society and The British Academy (2018:5), is a key to inspire concerned citizens to be actively engaged in shaping their future and equips them with the means to function accordingly. They explained that it is through adapting what, where and how we learn that we can respond to new work patterns, lifestyles, technologies and knowledge that are brought forth in this ever-changing world.

It is quite logical to think that a normal human being accumulates a body of knowledge through interacting with their immediate environment to answer to the challenges of life. They may acquire knowledge from experts, tradition, experience or scientific methods.

In scientific methods, we carry out research to acquire knowledge and develop the understanding of the world we live in. It is here, aligned with the philosophical orientation that we adopt, that the research method/s are chosen to generate meaning which we call knowledge. Accordingly, this research used questionnaires and document analysis as methods of generating data from the subjects of the study. In educational research of this type, Creswell (2009:216) contended that a research method involves the forms of data collection, analysis and interpretation that researchers propose for their studies.

In the next section, the activities required under the methodology part of the report are presented in detail, i.e., the population identified for the study, the target population where the samples were taken from, the procedures for selecting the necessary samples, the strategies used for data collection, and the instruments applied for extracting information for the research are discussed in detail.

4.4.1 Population and Sampling

4.4.1.1 Population

A population is a set of all the units which exhibit various characteristics and for which the results generated from the research can be generalised (Shukla, 2020:2). According to Bhattacharjee (2023:72), a population is defined as “all people or items (unit of analysis) with the characteristics that one wishes to study. The unit of analysis may be a person, group, organisation, country, object or any other entity that you wish to draw scientific inferences about.” This study encompassed the population of interest made up of 600 individuals, namely, 150 senior students, second to fourth year from four universities: AAU and Kotebe Education University, public HEI, and two private HEI: Renaissance Global College of Distance, and Virtual Learning & Unity University. The students were studying towards their B.A. degree in Management and ICT Education through the ODL system. In addition, the population included 16 lecturers who participated in developing the course materials for the proposed fields; eight coordinators who were managing the ODL programmes at the two private and two government HEI; and 16 coursemodules (4 from each institution) which were used as learning materials for the specified field.

4.4.1.2 Sampling

Many research papers in social science show that factors like expense, time and accessibility frequently prevent researchers from getting information from the whole population (Bhattacharjee, 2023:73). As a social science researcher, I faced the same challenges and was forced to consider a smaller group or subset of the total population of interest for observation and analysis. According to Pandey and Pandey (2015:40), the objective of getting a smaller group, recognised as a sample of the population of interest, is to obtain accurate and reliable information about the universe with minimum of cost, time and energy and to set out the limits of accuracy of such estimates. For this study, a sample size of 235 senior students (out of 600), all 16 lecturers, and all eight programme coordinators were supposed to take part in this study; 32 course modules (out of 144, 36 from each institution) were also targeted to be reviewed for document analysis. The samples represent 39% of the intended number of distance learners, 100% of the CW, 100% of coordinators, and 44% of the course modules.

For descriptive research of this project type, 20% of the target population is sufficient and as studies show, the larger the population, the smaller is the percentage of the sample required. For small populations (under 100 persons), the sample size is approximately equal to the population;

for average populations (around 500 people) it is approximately 20%; for larger populations (of 5 000 or more persons), it is about 12.5% (Omniconvert, 2020).

Thus, I aimed at achieving the utmost reliability and validity of my results, involving 100% of the proposed CW and coordinators, and 39% of distance learners. Moreover, the aim was to ensure that findings were credible and dependable based on using 44% of the reviewed modules. The four institutions enrolled distance learners from Addis Ababa, regional towns and villages and characteristics like year for seniority, age, marital status and gender called for a consideration of the stratified random sampling technique to capture the required amount of data from the sample frame: senior students attending their B.A. degree in Management and ICT Education programmes. Furthermore, purposive sampling was employed to select course writers and programme coordinators involved in module preparation and program coordination, respectively. This approach ensured comprehensive representation of the samples, as these individuals were deemed pertinent to the study due to their extensive involvement in their respective roles.

4.4.2 Research Instruments: Their Uses and Limitations

As discussed under Section 4.3, this study required a pragmatist point of view which called for mixed methods research design where both quantitative and qualitative approaches were used to obtain appropriate data from the participants. In so doing, questionnaires consisting of closed and open-ended questions were developed and administered to both students and course writers/programme coordinators. A checklist adapted from QM™ Rubrics 2014 was also used to analyse the appropriateness of the course modules. According to Chaumba (2013:326), a mixed method study allows for comprehensive analyses of phenomena, and it enhances the validity of the findings by minimising the weaknesses of using either the quantitative method or qualitative method on its own. This called for the collection of data to be geared towards the mix of evidence needed to make appropriate judgements about the ODL programmes or policies (Peersman, 2014: 1).

Everything mentioned above requires the researcher to be systematic while collecting data to give rigour and credibility to the findings generated.

It was, thus, found appropriate to include the distance learners, CW, and course coordinators in the study and to carry out an in-depth analysis of the learning materials using checklists to be able to devise a structure whereby a standard or model could be developed for appropriate production

of SIM by ODL institutions. The findings from all the sources supported each other in reflecting the existing scenario and recommending ways for improvement.

I experienced a complex situation while preparing and administering the questionnaires and faced a challenge as the cost of the overall work was getting higher with inflation in the economy. I administered the questionnaires for the CW and course coordinators by myself and had the opportunity to discuss with them my responsibility in the distribution, collection and submission of the questionnaires.

4.4.2.1 Questionnaires

According to Bhattacharjee (2023:75), a questionnaire is the most used instrument in survey research and consists of a set of questions (items) envisioned to collect opinions from respondents in a standardised manner. A questionnaire may consist of either unstructured or structured questions. With unstructured, open-ended questions, informants are required to provide responses in their own words whereas structured, closed-ended questions ask respondents to select an answer from a given set of choices (Bhattacharjee, 2023:81). For Oppenheim (2001:100), a questionnaire is an important tool for data collection and in its broader sense, it may contain checklists, attitude scales, projective techniques, rating scales and a variety of other research method.

To increase the reliability, validity and practicability of the questionnaires, piloting was carried out for the students' questionnaire with 12 students (3 from each institution attending their learning from second to fourth year) and with four CW for the CW/course coordinators' questionnaire. The feedback collected was used to adapt the questionnaires. The questionnaires consisting of dichotomous, open- and closed-ended questions and checklists were then self-administered, and relevant data was collected.

The open-ended questions incorporated in the students' questionnaire enabled respondents to freely address issues that would support the responses to the structured questions. As expected, open-ended questions included both in the students' and CW questionnaires provided enriching opinions regarding the nature of the learning materials and what should be considered while developing SIM (DL modules) to promote self-learning.

The available literature that reviewed types of instruments which are believed to be appropriate for research was explored. I contacted senior scholars and researchers like Aras Bozkurt, Professor in ODL at Anadolu University, Turkey and understood the need to develop a

questionnaire that would reflect an indigenous dimension. It was with this understanding that questionnaires were constructed for this study. However, accepted standards (specifications identifying the level or degree to which the course or the module or the unit of a lesson is to be done) were extracted from COL (2005:35), Debattista (2018:98-99), and IGNOU (1999a:8). Regarding the questionnaire for CW/course coordinators, a similar study was conducted by Yousuf, Anwar and Sarwar (2008: 131-133). With the permission of Dr Yousuf provided via email, I adapted some of the questions of the questionnaire used for their study and modified them to suit the purpose of my study.

Advantages/strengths of questionnaires

This method of data collection is quite popular and is considered as the heart of a survey operation, particularly in case of big enquiries. According to Kothari (2004:100-101), this method has both strengths and weaknesses that every researcher should be aware of.

The merits claimed for this method are:

1. There is low cost even when the universe is large and is widely spread geographically.
2. It is free from the bias of the interviewer; answers are in respondents' own words.
3. Respondents have adequate time to give well-thought-out answers.
4. Respondents, who are not easily approachable, can also be reached conveniently.
5. Large samples can be made use of and thus the results can be made more dependable and reliable; and according to Laws, Harper, Jones and Marcus (2013:309).
6. They are easy to analyse if mainly pre-coded questions are used.

Disadvantages/Limitations of questionnaires

According to Kothari (2004:100-101), the main demerits of this system are:

1. A low rate of return of the completed questionnaires; bias due to non-response is often indeterminate.
2. It can be used only when respondents are educated and cooperative.

3. The control over questionnaire may be lost once it is sent and it is the slowest of all methods.
4. There is inbuilt inflexibility because of the difficulty of amending the approach once questionnaires have been dispatched.
5. There is also the possibility of ambiguous replies or omission of replies altogether to certain questions, and the interpretation of omissions is difficult.
6. It is difficult to know whether willing respondents are truly representative.

4.4.2.2 Document analysis

Document analysis, also called content analysis, is the systematic analysis of the content of a text in a quantitative or qualitative manner (Bhattacharjee, 2023:114). Shava, Hleza, Tlou, Shonhiwa and Mathonsi (2021:554) referred to it as an approach involving a process designed to condense raw data into categories or themes based on valid inference and interpretations.

In this study, objective analysis of access devices and advance organisers included in the ODL materials thought to convey the intended content was accomplished against criteria contained in checklists used to evaluate their occurrence and appropriateness to promote self-learning. The checklists were used to determine whether the specific review standards were maintained by the course modules as mentioned in the QM HE Rubric.

The findings obtained from this approach were found to support those from the questionnaires administered to the learners and CW/CC.

Advantages of document/content analysis

Referring to Creswell (2009:168), content/document analysis has the following strengths:

1. It enables a researcher to obtain the language of participants.
2. It can be accessed at a time convenient to a researcher.
3. Represents data which are thoughtful in that participants have given attention to compiling them.
4. As written evidence, it saves the researcher the time and expense of transcribing.

Furthermore, according to Laws et al. (2003: 303):

5. It can add authority to the study.
6. It can avoid wasteful duplication of research which has already been done.
7. It enables the researcher to influence policy as it makes the researcher informed of the current work in the field, especially any which appears to contradict the researcher's argument.

Disadvantages/limitations of document/content analysis

Creswell (2009:168) has also documented the demerits of document/content analysis as a data-collection method:

1. Not all people are equally articulate and perceptive.
2. It may be protected information unavailable to public or private access.
3. It requires transcribing or optically scanning for computer entry.
4. Materials may be incomplete.
5. The documents may not be authentic or accurate.

Laws et al. (2013: 303) added the following:

6. The usefulness of the method depends upon the quality of information available for the area of concern.

4.5 DATA ANALYSIS

Data analysis, according to Laws et al. (2003: 381), is a process of taking things apart and putting them together again and it is where the researcher should understand the links between the materials they have collected from the subjects of the study and their research question. Kothari (2004:130) also described data analysis as an activity where indices or measures are computed to determine the patterns of relationships that exist among the data groups. Kothari (2004:122) stated that it is a general way combining a few closely related operations which are performed with the purpose of summarising the collected data and organising these in such a manner that they answer the research question(s). Although processing and analysing of data go together,

they need to be carried out in such a way that the meaning of the data is clear. Healey (2012:487) conceptualised the process of data analysis in the following array of activities.

Database	→	Statpak	→	Output	→	Analysis
(Raw information)		(Computer programs)		(Statistics and graphs)		(Interpretation)

Figure 4.1: The Data Analysis ProcessSource

Source: (Healey, 2012: 487)

4.5.1 Analysis of Quantitative Data

As discussed in Section 4.3, data was collected predominantly by using the quantitative approach as part of the mixed methods design.

The intention of the study was to find out whether the variables, namely, the quality of the course materials and the knowledge and professional skills of CW and programme coordinators in ODL, affect students' learning. The study also carried out comparisons between the effectiveness of these inputs by the government and private universities.

In this study, both independent and dependent variables were identified and the impacts one had on the others were examined. The analysis began by determining the effects and investigated their causes. Jumoke (2017:48) explained that the independent variable (or in some instances, independent variables) is exposed to manipulation. A dependent variable on the other hand is expected to be affected by the manipulation made on the independent variable. The independent variable (X) is also known as the input variable and it illustrates the presumed cause, predictor or an antecedent while the dependent variable (Y), which is also known as criterion or outcome variable represents the presumed effect or consequence. Having the orientation of determining cause-effect relationships, this study used the Chi-Square Test (χ^2) which according to Frimodig (2020:1) is:

a non-parametric test when it is used to check goodness for fit. We typically use it to find how the observed value of a given event is significantly different from the expected value. In this case, we have categorical data for one independent variable, and we want to check whether the distribution of the data is similar or different from that of the expected distribution. It is also used to test

association/independence when we have categorical data for two independent variables, and we want to see if there is any relationship between the variables.

As it is commonly used, statistical descriptions like graphs, pie-charts, frequency distributions and percentages were used to compare the proportions of participants who responded in different ways. Tabulations were managed with Microsoft Word and Microsoft Excel was used to depict results in graphs.

As a researcher, I argue that distance learners could perform better if they are provided with study materials having all access devices and advance organisers properly and regularly incorporated in them to promote self-learning and being designed to address their needs and level of understanding. The dependent variable for this study was the quality of the DL modules and the effects to be measured, the expected performance of distance learners and the knowledge of CW and programme coordinators about ODL and the professional skills of the CW were labelled to be independent variables which are considered as factors to be measured. For a comparison of relationships that exist between selected independent and dependent variables in data collected from private and government universities to see which of the DL modules were effectively developed, I applied the statistical test, namely the student's t-test (or t-test, in short).

4.5.2 Analysis of Qualitative Data

Data which were collected from the open-ended questions were transcribed, coded, cleaned and then converted into themes based on their categories. The coded data were then fed to a computer using software IBM SPSS Statistics version 25 and the findings were analysed for interpretation. Commonly, Microsoft Word and Microsoft Excel were also used for spell checking and tabulating purposes. While coding the typed transcriptions, I did a thorough reading through the collected data, cleaned them for appropriateness and labelled each section for computation. According to Cohen et al. (2007:461), "qualitative data analysis involves organising, accounting for and explaining the data that is making sense of data in terms of the participants' definitions of the situation, noting patterns, themes, categories and regularities."

I focused on the reflections of the CW and programme coordinators regarding their understanding of ODL, the professional development they received to be able to write and manage study materials for distance learners, and their knowledge of why students chose to learn through ODE. It was helpful while generating meaning from the responses of distance learners. The recommendations proposed for improvement were, of course, built from all these correlated

viewpoints. It is worth mentioning that analysis under this section was done by using a series of constant comparisons of each response with the one that followed it which of course empowered me to create a set of comprehensive categories that enabled me to absorb responses of all respondents.

4.5.3 Convergence of the Analyses

In this study, data collected from the students, CW and programme coordinators were presented in separate sections, however, a concurrent procedure was used while analysing and interpreting the results of the study. This was managed by combining the two forms of data as the intention of the study was to search for convergence or similarities among the results. Creswell (2009:31) described concurrent mixed methods as procedures which are used by a researcher to combine or merge quantitative and qualitative data to generate a comprehensive analysis of the research problem. In this design, the investigator collects both forms of data simultaneously and then integrates the information in the interpretation of the overall results.

4.6 VALIDITY AND RELIABILITY OF THE STUDY

Silverman (2002:175) stated that:

Unless a researcher can show his readers the procedures, he used to ensure that the methods were reliable and his conclusions valid, there is little point in aiming to conclude a research thesis/dissertation. Short of reliable methods and valid conclusions, research descends into a bedlam where the only battles that are won are by those who shout the loudest.

Bhattacharjee (2023:55) supported this opinion by stressing that in social science research, besides measuring constructs using any scale that a researcher prefers, they also must test the scales to ensure that: they indeed measure the unobservable construct, i.e., the scales are “valid”, and they measure the intended construct consistently and precisely which means the scales are “reliable”. Bhattacharjee expands his description of the terms as “Reliability and validity, jointly called the ‘psychometric properties’ of measurement scales, are the yardsticks against which the adequacy and accuracy of our measurement procedures are evaluated in scientific research”. Cohen et al. (2007:133) discussed how the two procedures are connected in approximating truth. They refer to reliability as a necessary but an insufficient condition for validity while validity is a necessary precondition of reliability. They extended their point of view in qualifying validity as a sufficient but not necessary condition for reliability. I concur with the explanations given above and was convinced that I would not know what was supposed to be measured and how precisely

it should be measured had it not been for the reliability and validity of the instruments used. Figure 4.2 portrays the comparison between validity and reliability and what it means to be valid and reliable concurrently.

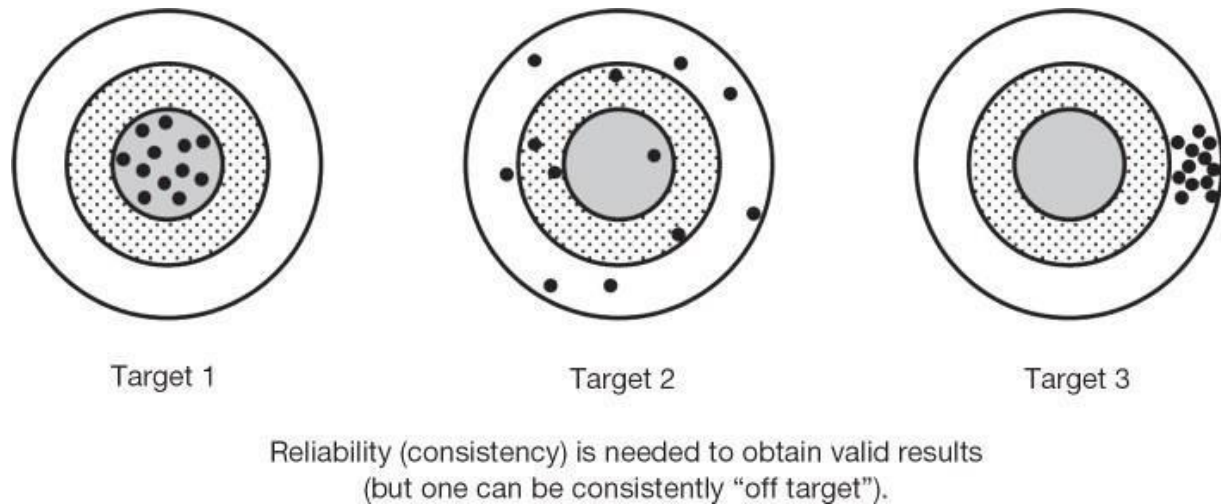


Figure 4.2: Comparisons between validity and reliability

Source: Bhattacharjee (2023:55)

Figure 4.2 depicts measurements of the shots into a specified target area. As it is demonstrated in the first picture, all the shot measures gathered almost uniformly at the centre which describes that the measures address both reliability and validity. The first picture indicates that the measurements are reliable because they fall consistently about the same location, the centre where the shot is expected to fall, and they are valid as the measures fall in each target area accurately. In the second picture, the measures fall accurately and address validity in each of the target circles but not consistently when we refer to the operation as a system. It is, hence, not reliable though it measures the right construct, but not in a consistent manner. Similarly, the third picture shows that all the measurements fall at about the same location consistently and includes reliability; however, it is not valid as the measurements have fallen outside of the intended location, the centre, and hence represents a wrong construct. These are the attributes needed to assure adequate measurement of the constructs of interest.

4.6.1 Validity

The student questionnaire used in this study was developed in structuring the statements which were accepted as standards specifying the extent of the course or the module or the unit of a lesson to be organised into measuring scales. The materials from which the statements were taken were COL (2005:35), Debattista (2018:98-99), and IGNOU (1999b:8). The questionnaire for CW and CC was partly adapted from Yousuf et al. (2008:131-133). Content analysis/evaluation also was done on the 16 course modules using the 6th edition checklist of the QM HE Rubric (2020) which consisted of score values assigned to standards ranging from Essential (3 points), Very Important (2 points), and Important (1 point). The completed checklists were then processed using IBM Statistical Version 25 for analysis purposes.

The questions in the questionnaire addressed relevant issues requiring the views of the respondents than those of the researcher. The questions were developed in such a way that they could derive the authenticity, richness, depth of response, honesty and candour which are the hallmarks of valid qualitative data. The students' questionnaire was prepared by this researcher, and for content validity, it was assessed qualitatively by a subject matter expert in the field of ODL. It also received a face value validity assessment by administering it to 10 representative respondents, who were subsequently asked whether there were some questions to be rewritten for a lack of clarity or unacceptability. Some alternative words were taken from the participants to enable respondents to understand the questions from the point of view of the researcher. A pilot study was also conducted on 20 representative respondents to check the feasibility of the instrument in answering the study objectives before deciding to conduct the actual full-scale study. Similarly, the adapted questionnaires were tailored to suit the specific objectives of this study.

I was on the right track in maintaining the validity of the study as almost all the adapted instruments had been empirically tested in previous social science studies and the new one received content validity and face validity and was piloted. Thus, I was in line with Kumar (2011:174) who described validity as the concept of appropriateness and accuracy applied to a research process. As I was searching for facts, the experiences of distance learners, CW & CC would give flesh to my discussion in capitalising on the proposition made by Silverman (2002:175) about reliability and validity.

In many published articles and e-books, though there are several types of validity procedures, the most frequently used ones are content validity, criterion-related validity and construct validity. As

has been made clear above, this study used procedures that showed the validity of the instruments and their measurements.

4.6.2 Reliability/Trustworthiness

In-depth reading on the appropriateness of the instruments used reminded me that reliability and validity resemble the two faces of a coin; reliability and validity are both needed to assure adequate measurement of the constructs of interest as a coin is determined by its two faces. However, each still needs its own description. According to Kumar (2011:168), “if a research tool is consistent and stable, hence predictable and accurate, it is said to be reliable. The greater the degree of consistency and stability in an instrument, the greater its reliability”. Similarly, Sekaran (2003:203) defined the reliability of a measure as a sign of the stability and consistency with which the instrument measures the concept and helps to assess the goodness of a measure. Aron, Coups and Aron (2013: 625) qualified Sekaran’s definition in describing it as the degree of consistency or stability of a measure and it signifies the extent to which another researcher would get the same result if they were to use the same measure on the same phenomenon under similar situations.

This study followed a mixed methods design and addressed the reliability of the quantitative part by providing similar guidelines on answers to questions, and a fair amount of time to understand, complete and return the questionnaires through the coordinators who managed the distribution and collection (Bhattacharjee, 2023:56).

The trustworthiness of the qualitative part of the study were met by providing instructions to be applied uniformly. This enabled me to determine that the participants and I had mutual understanding of the concepts. As Kumar (2011:177) proposes, the following research measures were upheld: credibility (honesty while abstaining from bias in interpreting the results and based on specific-context situation), confirmability (in getting corroboration or confirmation from experts in the field), transferability (showing how the methods could be applied in similar settings), and dependability (as I was the person in charge of content analysis).

4.6.3 Triangulation

It is quite common to see papers published using at least one methodological technique which researchers feel most comfortable using, which often becomes their favourite or only approach to research (Berg 2001:4). Berg further concurred with the explanation given by Denzin (1978:295) who discussed that many researchers perceive their research method as a theoretical tool and

argued that this stance led to many of them failing to recognise that methods impose certain perspectives on reality. Cohen et al. (2007: 141) underpinned this understanding by arguing that trust in one method may bias or twist the researcher's picture of a dimension of a reality under study. They stated that researchers need to be confident in the study they are doing; such confidence can be achieved as far as nomothetic research is concerned when different methods of data collection yield substantially the same results. By combining several methods, researchers obtain a better, more substantive picture of reality; a richer, more complete array of symbols and theoretical concepts; and a means of verifying many of these elements (Berg 2001:4).

This study used a concurrent triangulation design and aimed at achieving validity by using triangulation. According to Cohen et al. (2007:141), triangulation, in its original and literal sense, is a method of determining the whereabouts of a focal spot or objective and is commonly used by maritime navigators, military strategists and surveyors. Figuratively, triangular techniques in the social sciences attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint and, in so doing, by making use of both quantitative and qualitative data (Cohen et al., 2007:141). In a concurrent triangulation design, the researcher collects both quantitative and qualitative data concurrently and then compares the two databases to determine if there is convergence, differences, or some combination. MM researchers take advantage of this design as it can result in well-validated and substantiated findings (Creswell, 2009:196-197).

As a researcher in the field of social science, I recognise that the choice of mixed method research method offers perspectives from two vantage points focused on the same objective. Each method provides a distinct viewpoint through which we observe and interpret the social aspects and the corresponding reality that exists in the world. I also concur with Denzin (1978: 295) that triangulation is useful in presenting varieties of data, theories, and methods and not to restrict it only to data collection. This study used both qualitative and quantitative methods, with the quantitative approach outweighing through the process. In other words, the study used a questionnaire (with structured and unstructured questions) and document analysis as sources of data. Moreover, to reduce threats to trustworthiness, this study used triangulation as the process of obtaining information from more than one source and revisited the collected data before writing up the report. The MM approach was found to be relevant to validate this study as its application was to ensure convergence or agreement in the collected data. In this study, triangulation was used to cross-validate comparable results obtained using the instruments used and when they were found to be congruent in the dimensions they measured. For instance, larger number of

distance learners might indicate that their learning modules were motivating and enabled them for self-learning, or they did not find the modules attractive or engaging which then demotivated them. Such responses or indications were explained on the open-ended part of the questionnaire or confirmed in the content analysis.

In this research, I created categories and themes from the open-ended questions in the questionnaires. I then analysed the content to support the findings I found using the structured questions in the quantitative part of the study. I observed that DE students studying are of different ages, have various responsibilities, have different language skills, and experience different levels of access to social interactions and support. These might have led them to answer the same questions differently; however, I tried to accommodate each response to reflect an issue in the answers to the open-ended questions.

4.7 ISSUES CONSIDERED IN THE STUDY

In this section, issues related to ethics of research and the delimitation and limitations of the study are addressed. As expected, all ethical issues were managed ahead of data collection in receiving a confirmation letter from University of South Africa (Unisa) to involve humans as the subject of this study.

4.7.1 Issues Related to Ethics

According to Mintz (2010:1), “the term ethics is derived from the Greek word *ethikos* which itself is derived from the Greek word *ethos*, meaning custom or character.” Most people think of ethics as morals which they refer them to describe rules that distinguish right from wrong. Resnik (2020:1) associates it with the golden rule “Do unto others as you would have them do unto you”, which is a code of professional conduct like the Hippocratic Oath “First of all, do no harm.” Resnik portrays ethics also as a religious dogma preaching the Ten Commandments “Thou shalt not kill.”, or as an astute aphorism like the sayings of Confucius. Ethics can also be defined from the point of view of disciplines that study standards of conduct, such as philosophy, theology, law, psychology or sociology. It has also been defined as a method, procedure or perspective that researchers use to decide the approaches that would enable them to analyse complex problems and issues (Resnik, 2020:1).

Social science researchers describe research ethics as a complex set of values, standards and institutional policies created by the concerned institution to guide and regulate scientific activities (Madushani, 2016:26). Ethical issues are a crucial element of social research and I concur with

the German sociologist Max Weber (1946, as cited in Silverman, 2002:200) who stated that “all research is contaminated to some extent by the values of the researcher and only through those values do certain problems get identified and studied in particular ways”.

Ethical questions are raised in every aspect of the process of research, and it is not possible to make research ethical only through accepting a particular set of rules and procedures – it is compulsory to entertain the ethical aspects of the overall endeavour (Laws et al., 2003:233). Isreal and Hay (2006:7) highlighted this concern by stressing the fact that researchers need to protect their informants through developing trust with them thereby promoting the integrity of their research. They extended their concern about ethical questions by mentioning that issues like personal disclosure, authenticity and credibility of the research report, the role of researchers in cross-cultural contexts, and issues of personal privacy through forms of internet data collection must be addressed (Isreal & Hay, 2006: 7).

Involving informants in a study begins at the data-collection stage and it is where a sense of rapport between a researcher and their respondents is developed to acquire their trust and confidence. According to Laws et al. (2003:239), getting information from participants is tied up with the process of getting voluntary but formal consent from them. Laws et al. (2003 :239) extended their advice to researchers to pay attention to the following points: to devise appropriate ways of confirming that respondents understand what the research is about, namely, its purpose, the expected outcomes of the study, the acknowledgement of finance providers and sponsors, the expected uses of the data, possible benefits of the study and possible damage that might concern respondents, how data will be recorded and stored, and the degree of anonymity and confidentiality which can be offered to participants.

Official permission should be obtained to undertake the research ahead of the actual collection of data. I first secured ethical clearance from the University of South Africa (Unisa) (Appendix A). The Director of the UNISA Centre in Addis Ababa wrote a letter to the sampled Universities asking for their cooperation in assisting me to conduct the study at their institutions (Appendix B). After receiving written permission from the presidents of the four institutions which were included in the study (Appendix C), I started with the collection of data.

According to Cohen, Manion and Morrison (2007:51), social scientists must gain access to and acceptance in the research setting and are expected to explain the likely social benefits of their endeavours against the personal costs to the individuals taking part. The human subjects of the study – students, CW and course coordinators – were also made aware that their participation in

the study was voluntary, that they had the freedom to withdraw from the study at any time without any unfavourable consequences, and they would not be harmed because of their participation or non-participation in the project (Bhattacharjee, 2023:137). This was assured by all participants through receiving and signing an informed consent form that clearly described their right to not participate and right to withdraw, before their responses in the study could be recorded. Moreover, the consent form was used to introduce the respondents to the research topic and the instructions they should follow, to clarify the doubts that they might have about participating, to encourage them to take part in the study and to assure them of anonymity and confidentiality so that their future well-being would not be jeopardised (Bhattacharjee, 2023:138).

I followed the guidelines provided by social scientists like Laws et al. and was happy to apply the rules of the game as it enabled me to generate credible data from the respondents. The forms which were used for getting consent are indicated in the appendices (Appendices A–D). Permission was granted by the presidents of the four institutions which were selected in this study to collect data from their students, CW and programme coordinators (Appendix C).

The researcher had a supporting letter from Unisa (Appendix B) and provided them the ethical clearance (Appendix A). Face-to-face contact was made with each course writer and programme coordinator and a thorough explanation was given to them of the value of completing the questionnaires and returning them within the allocated time. This would enable the study to contribute to the body of knowledge. Enough time was spent with the CW and coordinators to clarify doubts and issues they felt should be addressed before administering the questionnaires. As mentioned earlier, all the approaches used to collect data from the subjects of the study were discussed during personal meetings with each of the coordinators. Moreover, I gave them all my contact information to encourage them to return the worked questionnaires from the students.

A special communiqué, requesting the CW and the course coordinators to give due consideration in providing their responses to the questionnaires and to return them as fast as possible, was also sent some time after I had distributed the instrument to each of them. Programme coordinators were also requested to explain to the students in case they failed to understand something, like the purpose of the study, from the text printed on the questionnaire. I gave a thorough explanation to the programme coordinators that the respondents were chosen randomly from each institution and the gender issue would be addressed depending on numbers available to give the study an impartial dimension.

4.7.2 Issues related to Confidentiality and Anonymity

One of the strategies that might be used to improve response rates in survey research is assuring the respondents that their private data or responses will not fall into the hands of any third party (Bhattacharjee, 2023:81). Protecting the respondents' interests, future well-being, and identity should be guaranteed in a scientific study. This is handled using the dual principles of anonymity and confidentiality (Bhattacharjee, 2023:138).

According to Berg (2001:57-58), confidentiality and anonymity are used wrongly as synonyms as they have different connotations. Berg described confidentiality as an ethical practice whereby the researcher promises to their respondents that any references indicating the respondent's identity are completely removed. Anonymity literally means that the subjects remain nameless.

Kumar (2011:233) supported the above discussions in saying that researchers should not share information about their informants with others for purposes other than research and it is unethical to disregard the confidentiality of the data gathered from respondents.

This study used self-administered survey questionnaires, and anonymity of the respondents could, thus, easily be secured as I was completely separate from the respondents and there was no possibility for me to know to whom surveys were distributed and no identifying marks were placed on the returned questionnaires. By the same token, I reassured respondents of confidentiality of the responses they provided promising them that I would not disclose a respondent or identify in any report, paper or public forum (Bhattacharjee, 2023:138).

There are times when respondents might not want to have a clandestine identity. Though I did not face such experiences, Creswell (2009:94-95) argued that researchers need to anticipate non-confidential informants and permit them to hold ownership of their voices and exert their independence in making decisions. Creswell (2009:94-95) extended his discussion in warning that such respondents should be well-informed about the possible risks of non-confidentiality, such as the inclusion of data in the final report that they may not have expected, information that infringes on the rights of others that should remain concealed, and some others.

4.7.3 Issues Related to Deception or Covert Activities

This study transparently addressed the purpose of the study and stated the main research question on the cover page. The objectives of the study were also made clear to the respondent distance learners, CW and CC with statements addressed in the questionnaires (Appendices E

& F). The respective coordinators of the programme also gave additional clarifications to the student respondents. The sponsors of the study were also disclosed to the subjects. Thus, no deception was experienced as the participants' understanding of the purpose of the research and mine were similar (Creswell: 2009:93). I believe that I, therefore, established trust and credibility for the questionnaires I administered to the distance learners, CW and programme coordinators.

Deception, according to Isreal and Hay (2006:156), means misrepresenting the extent of the study to participants. Erikson (1967:373) argued that covert research and its associated deception endanger the potential of the future researchers to undertake investigations by violating the trust and cooperativeness of informants and/or the public in the similar set ups. Some other social scientists such as Miller (1998:50) countered this argument by maintaining that researchers who are interested in conducting a covert investigation tend to do research in restricted areas occupied by people who are already suspicious of strangers because of the potential threat of legal sanctions associated with their behaviours. The adoption of a covert research role, however, must be carefully considered, for, in addition to potentially violating the rights of the subjects, there is a real possibility that the researchers themselves might come to some harm or face legal challenges (Berg, 2001:55-56).

4.7.4 Issues related to Limitations and Delimitations of the Study

As discussed under Section 4.4.1.2, 235 senior students (out of 600), all 16 lecturers and all eight programme coordinators were considered for the quantitative study. Similarly, 32 course modules (out of 144, 36 from each institution) were also selected for review by means of document analysis. A list of the institutions that took part in this study is found in the appendices.

I believe I recruited an appropriate number of participants for the study. Of the 15 (10 government and five private) universities providing courses through distance mode, four were purposely selected considering their geographical location (which facilitated the return of the questionnaires), my long years of services and my direct connection (Renaissance Global College of Open and Virtual Learning) with the modality. Similarly, the departments, Management and ICT Education were chosen because the courses were delivered through ODL approach.

According to Pandey and Pandey (2015:40), as long as the objectives of the study are met, and accurate and reliable information about the universe is generated with a minimum of cost, time and energy, an appropriately chosen smaller size of a sample could be appropriate. This study was, thus, in alignment with the standard expected of social science researchers.

Questionnaires were administered by the programme coordinators and the distribution of the questionnaires was made according to the schedules of the office of the registrar of each institution. As distance learners reside at different locations (cities, towns and rural areas), it was anticipated that some of them might not be reached within the specified time and schedules needed to be extended to meet the required number of the sample. However, despite all the efforts exerted, some students did not return the questionnaires. Nearly all the CW and all programme coordinators returned the questionnaires on time.

4.8 CHAPTER SUMMARY

In this chapter, the core components of the study, the philosophical orientation, the research design and the methodology were discussed in detail. The reasons for choosing the mixed methods design and the techniques used in data collection (questionnaires and rubrics-based document analysis) were also described and elucidated. To ensure the rigour of the study, different procedures were carried out, namely reduction, cleaning and capturing of data. Following organisation of data into their categories, and labelling them in codes, the approaches used in the analysis of data were discussed. In addition, the validity, reliability and trustworthiness of the instruments were discussed – these principles will be addressed by triangulating the results from the different instruments. Finally, the chapter highlighted issues related to ethics of research like keeping the privacy, confidentiality and anonymity of the subjects of the study to safeguard their future wellbeing. Next, in Chapter 5, data which were collected using the methods mentioned in Chapter 4 are organised in tabular forms for clear presentation and the use of statistical tools and interpretations based on the data.

CHAPTER 5: DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

5.1 INTRODUCTION

The aim of this study was to evaluate the quality of ODL materials used by selected HEI in Ethiopia which were involved in the ODL system. The study obtained the views of selected learners, course writers and coordinators regarding their learning distance materials. The researcher also went through the modules for document analysis, thereby triangulating data collection. The objectives of the study were to determine the existing characteristics of ODL materials used by the selected HEI, investigate the level and depth of ODL professional development provided to the CW and thereby compare government and private HEI for satisfying the philosophy of self-learning. The study intended to bring the findings of the study to the attention of the MoE and academics so that the quality of ODL materials can be assured and recommend to the government of Ethiopia the necessity of establishing ODL professionals' association to consult and share the responsibility of managing the ODL system. This chapter presents an analysis of both quantitative and qualitative data collected from students, CW, coordinators and learning modules by way of tabulation. It presents data generated from the participants using IBM SPSS 27 (28) software and from the learning materials by applying the rubrics of OM HE and OM CPE (Section 1.3.3). This chapter starts with an analysis of the valid response rates and then proceeds with the analysis of the quantitative data beginning with the presentation of biographical data. It also outlines the challenges experienced during data collection and some limitations of the study. The next section discusses the students' responses regarding the approach used in the course modules followed by an analysis of the CW and coordinators' knowledge of ODL, and their understanding of the structure of learning materials. This is followed by an analysis of the views of the CW and coordinators about the preparation, implementation and execution aspects of course development. The last section of the chapter presents the results of the document analysis using a rubric with a set of criteria for reference.

5.2 VALID RESPONSE RATES (IN %)

This section presents in percentages the responses collected from the respondents who shared their experiences concerning the quality of the ODL materials they used in their learning. The sample plan was to recruit 235 randomly selected students enrolled for a B.A. degree in the departments of management at three HEI (two private and one government) and ICT education at another government HEI. Moreover, 16 CW and eight coordinators were purposely selected to

take part in the study. However, ultimately, the actual participants were 175 students, 15 course writers and four coordinators.

The validity of a study is closely associated with the appropriate responses collected from the respondents. According to Laws et al. (2003:365), a very low response rate casts doubt on the quality of research as there may be differences between those who took part in the research and those who did not. However, Morton, Bandara, Robinson and Carr (2012:108) submitted that there is no simple answer to what an appropriate response rate is, and no rate is automatically indicative of greater or lesser accuracy and utility.

In the context of the above discussion, the data presented next encompasses both dimensions of acceptable response rates and sample size.

Table 5.1: Response rates (of human subject element)

Sample	Sample Size	Response	Response rates in%
Course writers	16	15	93.75
Coordinators	8	4	50.00
DE students	235	175	74.44
Average			74.90

Table 5.1 presents the response rate of data collected from the indicated participants. It took the researcher more than four months to secure the responses tabulated above, which was sufficient to get a maximum response. The researcher contacted the coordinators assigned by the university through emails at least twice per week in addition to frequent visits to the coordinators to encourage them to submit the data. Despite all these efforts, many incomplete questionnaires were returned, while some were not returned at all. During data collection, some of the students were living in areas where a civil war was taking place and had completely lost connection with their universities. According to Johnson and Wislar (2012:1805), a response rate of 60% is used as a threshold of acceptability by some scholars and face validity as a measure of survey quality. This study meets the required minimum as the average response rate reads 74.9%. Johnson and Wislar further argued that like $p < .05$ in statistical comparisons, 60% is only a “rule of thumb that masks a more complex issue” (Johnson & Wislar, 2012:1805).

5.3 COHERENT ANALYSIS OF QUANTITATIVE AND QUALITATIVE DATA

The study considered distance students who had completed their first-year courses successfully and senior ones doing B.A. degree in management at one government and two private HEI and those attending ICT education at one government HEI. Only ICT education was provided through DE. It was assumed that senior distance learners had some experiences to share regarding the questions required for the study.

Below, gender distributions of student respondents are presented through Tables 5.2.1 – 5.2.3.

Table 5.2.1: Students attending government institutions by gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	61	67.8	67.8	67.8
	Female	29	32.2	32.2	100.0
	Total	90	100.0	100.0	

Table 5.2.2: Students attending private institutions by gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	51	60.0	60.0	60.0
	Female	34	40.0	40.0	100.0
	Total	85	100.0	100.0	

Table 5.2.3: Comparison of students attending both Institutions by gender

		Gov.	Priv.	Total	Valid Percent		Cumulative Percent
					Gov.	Priv.	
Valid	Male	61	51	112	34.9	29.1	64.0
	Female	29	34	63	16.6	19.4	64.0 + 36.0 = 100.0
	Total	90	85	175		100.0	

As displayed in Tables 5.2.1 to 5.2.3, of the 175 total respondents, 112 (64%) were male and 63 (36%) were female. Some 61 (34.9%) men and 29 (16.6%) women were studying at government institutions, while 51 (29.14%) men and 34 (19.4%) women were attending private HEI. Across the HEI, the number of male students was larger than the female students and when we look at their distribution on sector basis, the number of female students attending at the private HEI was found to be slightly larger. This could be attributed to the flexible nature of enrolment and attendance

which enabled female students to join private HEI and perform their family, professional and social responsibilities at the same time.

5.3.1 Socio-demographic Profile of Student Respondents

5.3.1.1 Age distribution of student respondents

As shown in Table 5.3, the respondents' ages fell into five groups.

Table 5.3: Age distribution of student respondents

Valid		Frequency		Percent	Valid Percent	Cumulative Percent
		Gov.	Priv.	Gov. (Priv.)	Gov. (Priv.)	Gov. (Priv.)
	20 or younger	0	6	0 (7.1)	0 (7.1)	0 (7.1)
	21-30	30	45	33.33 (52.9)	33.33 (52.9)	33.3 (60.0)
	31-40	47	31	52.22 (36.5)	52.22 (36.5)	85.5 (96.5)
	41-50	9	3	10.0 (3.5)	10.0 (3.5)	95.5 (100)

Note: Gov. = Government, Priv. = Private

An examination of data shows that the age group 31-40 had the highest percentage (52.22%) in government universities while the age group 21-30 which was second in government institutions had the highest percentage (52.9%) in private institutions. Students in the age range 41–50 and above 50 years were also enrolled at these institutions, though their percentages were smaller at 10% and 3.5% in government and private institutions respectively, while those for students aged over 50 stood at only 4.44% in government institutions. Younger students (7.1%) were found attending private institutions while none were recorded in the government ones. This might be the access that the private institutions created at their branch offices and the relaxed intake requirements of the institutions. As the analysis shows, different age groups were represented in these institutions because DE is a system that welcomes such age differences.

5.3.1.2 Marital status of student respondents

Table 5.4 presents the marital status of the respondents from both government and private HEI.

Table 5.4: Marital status distribution of student respondents

Marital status		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov.	Priv.	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	Married	61	36	67.8	42.4	67.8	42.4	67.8	42.4
	Single	24	49	26.7	57.6	26.7	57.6	94.4	100.0
	Divorced/Separated	5	0	5.6	0.0	5.6	0.0	100.0	100.0
	Total	90	85	100.0	100.0	100.0	100.0		

Most respondents (61 + 36 = 97, [Gov. + Priv.]), representing 55.4% were married, while fewer (24 + 49 = 73, [Gov + Priv]), constituting 41.7% were single. Most respondents (67.8%) attending government institutions were married while 57.6% were single and from private institutions. Both married and unmarried people were reasonably represented in the sample, with married people being significantly more in government institutions while unmarried ones were more prevalent in private institutions.

5.3.1.3 English language proficiency of student respondents

Table 5.5 shows that most of the student respondents attending government and private institutions.

Table 5.5: Distribution of students' English language proficiency

Language proficiency		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov	Priv	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	Excellent	24	25	26.7	29.4	26.7	29.4	26.7	29.4
	Very Good	46	40	51.1	47.1	51.1	47.1	77.8	76.5
	Good	17	16	18.9	18.8	18.9	18.8	96.7	95.3
	Fair	3	4	3.3	4.7	3.3	4.7	100.0	100.0
	Total	90	85	100.0	100.0	100.0	100.0		

Some 77.8% and 76.5% respectively believed that they were proficient in English language which is a medium of instruction in both types of institutions.

5.3.1.4 Highest qualifications of student respondents

The student respondents were also requested to indicate their highest qualifications and whether they were still studying. Their responses are tabulated in Table 5.6 and Table 5.7.

Table 5.6: Confirmation and distribution of highest qualification of respondents

Response	Frequency		Percent		Valid Percent		Cumulative Percent		
	Gov	Priv	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.	
Valid	Yes	60	57	66.7	67.1	66.7	67.1	66.7	67.1
	No	30	28	33.3	32.9	33.3	32.9	100.0	(100.0)
	Total	90	85	100.0	100.0	100.0	100.0		

Table 5.7: Distribution of other qualifications of student respondents

Other qualifications got	Frequency		Percent		Valid Percent		Cumulative Percent		
	Gov	Priv	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.	
Valid	M.A. /M.Sc.	23	5	25.6	5.9	36.5	8.8	36.5	8.8
	B.A./BSc.	31	47	34.4	55.3	49.2	82.5	49.2	91.2
	Diploma	9	5	10.0	5.9	14.3	8.8	14.3	100.
	Total	63	57	70.0	67.1	100.0	100.0		
	No responses	27	28	30.0	32.9				

Table 5.6 indicates that 66.7% and 67.1% of students in government and private institutions respectively already had other degrees. According to Table 5.7, most respondents in government and private schools, 34.4% & 55.3% had B.A/B.Sc. degrees in other fields. A significant number of government students, 25.6%, were in possession of M.A/M.Sc. degrees as opposed to 5.9% in private institutions. However, as Table 5.7 reflects 30.0% (27 respondents) from the government and 32.9% (28 respondents) from private institutions did not respond to this question possibly because they did not have any qualifications.

5.3.1.5 Employment status of student respondents

As discussed in Chapter 2, DE is primarily meant for those who can manage different responsibilities and still need to upgrade their academic careers and acquire tailored skills that could serve specific purposes. Increasingly, the global market requires well-educated professionals, and those who upgrade their skills to remain in their positions and relevant to the changing job needs. Table 5.8 shows the distribution of students according to their employment status.

Table 5.8: Distribution of student respondents by employment status

		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov	Priv	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	Yes	86	63	95.6	74.1	95.6	74.1	95.6	74.1
	No	4	22	4.4	25.9	4.4	25.9	100.0	100.0
	Total	90	85	100.0	100.0	100.0	100.0		

Table 5.8 confirms that almost all respondents from the government institutions, 95.6%, and the larger number of students from the private institutions, 74.1% were employed. A significant number of respondents, 25.9% in private institutions were not employed; they were only pursuing their studies.

5.3.1.6 Working hours of student respondents

Most distance learners are adults and are expected to abide by the rules and regulations of their employers. Most companies have strict working hours that should be complied with. Their employees pursuing HE via the ODL system may not find it easy to actively engage in their studies while working. Table 5.9 summarises the length of time that student respondents were engaged at their workplaces.

Table 5.9: Types and distribution of working hours of student respondents

Duration of work		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv
Valid	8 hrs Monday-Friday	38	21	42.2	24.7	43.7	33.3	43.7	33.3
	8 hrs Monday-Friday & Half Saturday	7	12	7.8	14.1	8.0	19.0	51.7	52.4
	8 hrs Monday-Saturday	41	24	45.6	28.2	47.1	38.1	98.9	90.5
	Other	1	6	1.1	7.1	1.1	9.5	100.0	100.0
	Total	87	63	96.7	74.1	100.0	100.0		
	No response	3	22	3.3	25.9				

Most respondents, 45.6% (government) and 28.2% (private) were working for 8 hours daily from Monday to Saturday. Nearly the same percentage, 42.2% (government) and 24.7% (private) worked for eight hours from Monday to Friday daily.

In the context of the above, for people to advance their careers and lives through DE, SIM should be designed in a way that enables them to achieve the training objectives with minimum tutorial support.

5.3.1.7 Year of learning of student respondents

As discussed in Chapter 4, the study sampled 150 senior students from the second to fourth years at each of the four HEI. AAU and Kotebe Education University (KEU), represented the government institutions and Renaissance Global College of Open and Virtual Learning and Unity University, represented private institutions. The respondents were enrolled for their B.A. degree in management through ODL, while those at KEU were pursuing their B.A degree in ICT education. The target population at these institutions was 600 students. Of the expected 235 respondents based on the proposed sample of 600 participants, only 175 questionnaires (90 from government and 85 from private institutions) were returned, giving the response rate 74.44%. Table 5.10 depicts the number of respondents from each institution and the year of study.

Table 5.10: Distribution of year of learning of student respondents

Year of learning		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov.	Priv.	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	2 nd year	16	43	17.8	50.6	17.8	50.6	17.8	50.6
	3 rd year	24	25	26.7	29.4	26.7	29.4	44.4	80.0
	4 th year	50	17	55.6	20.0	55.6	20.0	100.0	100.0
	Total	90	85	100.0	100.0	100.0	100.0		

Table 5.10 shows that the larger number of respondents, 55.6%, were in their fourth year and attending government institutions, while 50.6% were in the second year and in private institutions. The percentages of third year respondents attending both types of institutions were closer with a little difference.

Most student respondents were in their fourth year, and it was assumed that they could provide more accurate information from their experiences. The larger number of second year students in private institutions indicates that they preferred these institutions instead of government universities located in undeveloped areas.

5.3.1.8 Reasons of student respondents for learning through the system of ODE

According to Matthews (1999:1), DE is a movement that transcends the traditional college/university setting and is intended to overcome the generic problems of scarcity and exclusivity. As a system of education, it encourages many to pursue learning and eliminates the barriers to learning. The respondents were asked why they opted to learn through the system of ODL and Table 5.11 presents their reasons. Some respondents gave multiple reasons; hence, the cumulative percent of the responses could not be calculated.

Table 5.11: Distribution of the reasons of student respondents for learning via ODL

Reasons to choose ODE		Frequency		Percent		Valid Percent	
		Gov	Priv	Gov	Priv	Gov	Priv
Valid	Securing a job while learning	68	55	75.6	64.7	75.6	64.7
	Enables to use own time & pace	38	32	42.2	37.6	42.2	37.6
	Lack of programme in regular class	5	8	5.6	9.4	5.6	9.4
	Physical impairment	3	5	3.3	5.9	3.3	5.9
	Economically best option	44	11	48.9	12.9	48.9	12.9
	Afraid of competition with regular students	2	4	2.2	4.7	2.2	4.7
	Failing to secure the minimum cut-point	1	5	1.1	5.9	1.1	5.9
	It gives me chance to challenge myself	36	17	40	20	40	20)

Most government and private institution students, 75.6% and 64.7% respectively, responded that the ODE system enabled them to work while learning at the same time. While government students, 44%, rated the system second from the economic aspect, private students gave it a second option for access in that the system afforded them an opportunity to learn at their own time and pace. Some 38% of government students selected this as the third option. A significant number of government and private students, 36% and 17% respectively, suggested that the system gave them the chance to challenge themselves academically, and promote their level of education while securing their jobs and handling different responsibilities.

5.3.1.9 Number of student respondents by institution of learning

As is indicated in Table 5.12 below, though equal proportion was assumed during the planning of data collection, latter the actual data were found to have a few differences.

Table 5.12: Distribution of student respondents by institution

Institution		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AAU	50	28.6	28.6	28.6
	KEU	40	22.9	22.9	51.4
	Government Total	90			
	UU	45	25.7	25.7	77.1
	RGCOVL	40	22.9	22.9	100.0
	Private Total	85			
	Grand Total	175	100.0	100.0	

Note: - AAU = Addis Ababa University, KEU = Kotebe Education University, UU = Unity University, RGCOVL = Renaissance Global College of Open & Virtual Learning

A relatively larger number of respondents came from AAU and Unity University, at 28.6% and 25.7% respectively. The remaining two institutions, one from each type, contributed the same number of respondents (40 [22.9%]).

5.3.1.10 Ways of receiving learning modules

Table 5.13 shows the students' responses regarding the ways they received their learning modules.

Table 5.13: Distribution of responses of student respondents on ways of receiving learning modules

Ways of receiving module		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov	Priv	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	Through post office	1	8	1.1	9.4	1.1	9.4	1.1	9.4
	Self-collection	61	70	67.8	82.4	67.8	82.4	68.9	91.8
	Via emails	22	2	24.4	2.4	24.4	2.4	93.3	94.2
	Through agents	6	5	6.7	5.9	6.7	5.9	100.0	100.0
Total		90	85	100.0	100.0	100.0	100.0		

As Table 5.13 shows, most respondents from both institutions: private (82.4%) and government (67.8%) indicated that they collected their learning materials themselves by visiting the centres where the materials were dispatched. A significant number of government students (24.4%) indicated that they were also supported to get the learning modules via email. The old tradition of

sending learning materials to distance learners through the post and via agents seemed was much lower in government institutions than in private ones.

5.3.2 Socio-Demographic Profile of CW and CC

As mentioned at the introduction section, CW and coordinators were some of the main participants in this study. Below, their socio-demographic profiles are presented and discussed.

5.3.2.1 Distribution of course writers and coordinators by place of work

As displayed in Table 5.14 below, the number of CW from KEU was greater than that of AAU by one, while for the private institutions, at Unity University (UU) & it was greater than Renaissance Global Open and Virtual Learning (RGCOVL) by two.

Table 5.14: Working place of course writers and course coordinators

Working place of CW & CC		Frequency		Percent		Valid Percent		Cumulative Percent	
		CW	CC	CW	CC	CW	CC	CW	CC
Valid	AAU	4	1	26.7	25.0	26.7	25.0	26.7	25.0
	KEU	5	1	33.3	25.0	33.3	25.0	60.0	50.0
	UU	3	1	20.0	25.0	20.0	25.0	80.0	75.0
	RGCOVL	3	1	20.0	25.0	20.0	25.0	100.0	100.0
	Total	15	4	100.0	100.0	100.0	100.0		

Key: CW: Course writer, CC: Course coordinators

These results may have arguably been reached because of the contacted professionals' willingness to respond to the questionnaires distributed by the researcher in person. AAU and KEU are government institutions. The researcher planned to collect data from four CW and two coordinators from AAU and KEU respectively. However, only one coordinator was found at each institution who could respond to the distributed questionnaires although no imbalance was registered across the participating institutions.

5.3.2.2 Higher qualification of course writers and coordinators

Higher education institutions encourage their teaching and research staff to upgrade their academic qualifications to improve their competency and efficiency levels. Those who manage DL are required to have extra skills to motivate distance learners to keep studying and complete their studies in time.

Table 5.15: Distribution of higher qualification among course writers and course coordinators

HQs		Frequency				Percent				Valid percent				Cumulative percent			
		CW		CC		CW		CC		CW		CC		CW		CC	
		Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv
Valid	PhD	4	0	2	0	26.7	0.0	50.0	0.0	26.7	0.0	50.0	0.0	26.7	0.0	50.0	0.0
	M.A./MSc	5	6	0	2	33.3	40.0	0.0	50.0	33.3	40.0	0.0	50.0	60.0	40.0	50.0	50.0
	Total	15		4		60.0	40.0	50.0	50.0	60.0	40.0	50.0	50.0	100.0		100.0	

Key: HQ: Higher qualification; CW: Course writer; CC: Course coordinator

As reflected in Table 5.15 comparing the qualifications of the CW and CC at the two types of institution types, 4 (26.7%) of the PhD holders were CW and from the government institutions. All the CW (6 [40%]) at the private institutions had master's degrees. The remaining 5 (33.3%) participants were master's degree holders working in government institutions. The same number of CC with master's degrees were responsible for coordinating the ODL programmes. The Ethiopian government has launched a comprehensive programme to improve the competencies of the teaching staff and support them to acquire PhD qualifications in a bid to improve the quality of HE programmes and human capital. Although private HEI are expected to do this, they do not fulfil this goal due to the cost of higher degrees, and they do not encourage and fund their teaching staff to pursue PhD studies. Instead, they prefer to recruit PhD holders to support their staff.

5.3.2.3 Course writers' and course coordinators' exposure at different levels of education

Table 5.16 presents multiple responses given by some CW and CC about the exposure they received at different levels of education. That is why the cumulative percentage could not be calculated.

Table 5.16: Distribution of teaching exposure of CW and CC at different levels of education

		Frequency				Percent				Valid percent			
		CW		CC		CW		CC		CW		CC	
Have exposure at		Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv	18.7	Priv	Gov	Priv
Valid	HS	3	0	0	2	18.7	0.0	0.0	50.0	25.0	0.0	0.0	50.0
	TTI	4	2	0	0	25.0	25.0	0.0	0.0	56.3	25.0	0.0	0.0
	HEI	9	6	2	2	56.3	75.0	100.0	50.0	100.0	75.0	100.0	50.0
Total		16	8	2	4	100.0	100.0	100.0	100.0	18.7	100.0	100.0	100.0

Note: - HS = High School, TTI = Teacher Training Institution, HEI = Higher Education Institution

As the table shows, all the instructors who prepared the learning modules were working at HEI and only four out of the 16 (25%) had exposure in government institutions and 2 (25%) out of eight in private institutions had the exposure or experience of teaching at teacher training institutions. Three (18.7%) CW had the exposure of working at the high school level. Regarding the CC who were working at HEI at the time of the study, only 2 (50%) of them reported that they had taught in high schools before. Knowing that nearly half of the CW had teaching exposure at different levels of education might help managers to know the kind of interventions and alignment that are required for effective teaching at HEI.

5.3.3 Understanding of Students about the Approaches used in the Course Modules

This section presents the students' responses regarding the approaches they used to study certain course modules. The respondents were asked to rate their responses on a Likert scale ranging from 1 to 5 scores for nine attributes that an ODL module should use in its approach. The students' responses regarding the difficulty and simplicity of the courses they studied are analysed.

5.3.3.1 Respondents' awareness of the difficulty or simplicity of the courses

ODL materials should be prepared based on the level of understanding of the target group members and their previous learning experiences to foster their motivation for learning.

Table 5.17: Student respondents' responses about the difficulty or simplicity of courses

Types of responses	N of respondents wrt their respective institutions & percentile expression			
	AAU (%)	KEU (%)	UU (%)	RGCOVL (%)
There were difficult courses	25 (50.0)	28 (70.0)	21 (46.7)	27 (67.5)
There were easier courses	20 (40.0)	10 (25.0)	20 (44.4)	10 (25.0)
There were no easier or more difficult courses	5 (10.0)	----	----	----
Non-response		2 (5.0)	4(8.9)	3 (7.5)
Total (%)	50 (100.0)	40 (100.0)	45 (100.0)	40 (100.0)

Key: - N = Number, WRT = With respect to

As shown in Table 5.17, in four institutions, the student respondents revealed that they encountered difficult courses with the largest percentage of 70% recorded at KEU, followed by RGCOVL, at 67.5%. A significant number of respondents from AAU (40%) and UU (44.4%) reported that some courses were easier to comprehend.

5.3.3.2 Reasons provided by student respondents for the difficulty of courses

Following the question mentioned in Section 5.3.3.1, the student respondents were also asked to indicate what they thought made some of their courses difficult to understand.

Table 5.18: Student respondents' reasons for rating some courses difficult.

Types of reasons		Frequency		Percent		Valid Percent	
		Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	Language used	6	16	5.6	17.6	5.6	17.6
	Higher scope (deeper content)	36	16	33.6	17.6	33.6	17.6
	Lack of motivation	10	15	9.4	16.5	9.3	16.5
	Lack of sufficient examples	30	29	28.0	31.8	28.0	31.8
	Voluminous content	0	8	0	8.8	0	8.8
	Requirement to refer extra sources	25	7	23.4	7.7	23.4	7.7
	Total	107	91	100.0	100.0	100.0	100.0

Some 33.6% respondents at government institutions rated first the scope of the courses that caused difficulty in understanding while 31.8% from private institutions picked the lack of sufficient examples in those courses as the major reason for difficulties. This same reason was rated second by the respondents from the government institutions at 28%. Some respondents gave multiple responses, hence, calculating the cumulative percent of responses was not found practical. The need to refer to extra sources, a lack of motivation and the medium of instruction (English language) used for the teaching-learning process were also indicated by the government respondents as third, fourth and fifth reasons having response rates 23.4%, 9.4% and 5.6% respectively that contributed to the difficulty of the courses. Similarly, the respondents from private institutions rated the language used and the wide scope of the courses as the second reason with value of 17.6% each. A lack of motivation in the courses, the volume of the courses and the requirement that course descriptions should refer to extra sources besides the modules were also indicated as third, fourth and fifth reasons that made the courses difficult according to respondents of the private institutions.

5.3.3.3 Reasons suggested by student respondents for easiness of courses

Student respondents were also required to provide the reasons regarding the courses highlighted in Section 5.3.3.1 what made them to be easier to understand. The responses are presented in Table 5.19.

Table 5.19: Distribution of reasons for easiness of courses.

		Frequency	Percent	Valid Percent
Valid	Types of reasons	Gov. (Priv.)	Gov. (Priv.)	Gov. (Priv.)
	Clear usage of language	28 (26)	27.7 (25.0)	27.7 (25.0)
	Systematic content presentation	29 (28)	28.7(26.9)	28.7(26.9)
	Exercises with feedback were many	19 (26)	18.8 (25.0)	18.8 (25.0)
	Prior learning was recognised	25 (24)	24.8 (23.1)	24.8 (23.1)
Total		101 (104)	100.0 (100.0)	

The table shows that the systematic presentation of the contents, the clarity of the language used, the recognition of prior learning and the availability of exercises together with feedback were rated as the first to the fourth reasons by the students in government institutions respectively. Similarly, the respondents from the private institutions rated systematic content presentation as the first reason at 26.9%, and both the clarity of the language used and the availability of exercises with feedback in the courses at 25.0%. This latter group valued the recognition of prior learning of students fourth at 23.1%. The respondents gave multiple responses; hence, the cumulative percentage of the responses could not be calculated.

5.3.3.4 Student respondents' understanding of content presentation of courses

Table 5.20 reflects the levels of agreement of the students regarding the nature of the content presentation of the materials.

Table 5.20: Distribution of agreements of respondents on their understanding on the nature & presentation of the subject matter/content

Assumed descriptors of the subject matter/content		Level of agreement of respondents WRT their respective institutions					
		SA	A	DA	SDA	Total	Grand Total
		G/P	G/P	G/P	G/P	G/P	G+ P
The main body of the text was logically sequenced.	Count	33/33	51/44	5/6	1/2	90/85	175
	% within descriptions	36.7/38.8	56.6/51.8	5.6/7.1	1.1/2.3	100.0	100.0
	Combined	93.3/70.6		6.7/9.5		100.0	100.0

Assumed descriptors of the subject matter/content		Level of agreement of respondents WRT their respective institutions					
		SA	A	DA	SDA	Total	Grand Total
		G/P	G/P	G/P	G/P	G/P	G+ P
There were frequent reinforcements.	Count	9/12	67/34	13/32	1/7	90/85	175
	% within descriptions	10.0/14.2	74.5/40.0	14.4/37.5	1.1/8.3	100.0	100.0
	Combined	84.5/54.2		15.5/45.8		100.0	100.0
There were feedback devices.	Count	12/14	60/35	14/24	24/12	90/85	175
	% within descriptions	13.3/16.5	66.7/41.2	15.6/28.2	4.4/14.1	100.0	100.0
	Combined	80.0/57.7		20.0/42.3		100.0	100.0
The language used was simple and hence the wholecourse was readable and understandable.	Count	41/14	31/52	17/14	1/5	90/85	175
	% within descriptions	45.6/16.5	34.4/61.2	18.9/16.5	1.1/5.8	100.0	100.0
	Combined	80.0/77.7		20.0/22.3		100.0	100.0
It encouraged me to read critically.	Count	29/25	39/23	22/27	0/10	90/85	175
	% within descriptions	32.2/29.4	43.3/27.0	24.4/31.8	0.0/11.8	100.0	100.0
	Combined	75.5/56.4		24.4/43.6		100.0	100.0
It communicated to me directly.	Count	22/23	32/22	32/34	4/6	90/85	175
	% within descriptions	24.4/27.1	35.6/25.9	35.6/40.0	4.4/7.0		100.0
	Combined	60.0/53.0		40.0/47.0		100.0	100.0
I was made to consult a dictionary (now and then) and other reference materials quite often.	Count	36/5	31/47	20/18	3/15	0/85	175
	% within descriptions	40.0/5.9	34.5/55.3	22.2/21.2	3.3/17.6	100.0	100.0
	Combined	74.5/61.2		25.5/38.8		100.0	100.0
The presentation of the reading text did not catch my interest.	Count	3/7	35/23	47/38	5/17	0/85	175
	% within descriptions	3.3/8.2	38.9/27.1	52.2/44.7	5.6/20.0	100.0	100.0

Assumed descriptors of the subject matter/content		Level of agreement of respondents WRT their respective institutions					
		SA	A	DA	SDA	Total	Grand Total
		G/P	G/P	G/P	G/P	G/P	G+ P
Combined		42.2/35.3		57.8/64.7		100.0	100.0
The contents of the lessons were discussed in a friendly manner.	Count	27/13	30/28	30/33	3/11	90/85	175
	% within descriptions	30.0/15.3	33.3/32.9	33.3/38.8	3.3/12.9	100.0	100.0
	Combined	63.3/48.2		36.6/51.7		100.0	100.0
The lessons were presented in such a way that their clarity gradually grows from simple to complex.	Count	36/19	45/53	8/11	1/2	90/85	175
	% within descriptions	40.0/22.4	50.0/62.4	8.9/12.9	1.1/2.3	100.0	100.0
	Combined	90.0/84.8		10.0/15.2		100.0	100.0
The lessons invited me to read and work on the in-text questions, self-check exercises and activities	Count	31/24	39/48	19/10	1/3	90/85	175
	% within descriptions	34.4/28.2	43.3/56.5	21.2/11.8	1.1/3.5	100.0	100.0
	Combined	77.7/84.7		22.3/15.3		100.0	100.0
The lessons were presented paying attention to my everyday language (common words, shorter sentences, and in personalized style).	Count	22/17	39/30	27/28	2/10	90/85	175
	% within descriptions	24.4/20.0	43.3/35.3	30.0/32.9	2.3/11.8	100.0	100.0
	Combined	67.7/55.3		32.3/44.7		100.0	100.0
The lessons were made concrete.	Count	26/17	32/25	31/40	11/3	90/85	175
	% within descriptions	28.9/20.0	35.6/29.4	34.4/47.1	1.1/3.5	100.0	100.0
	Combined	64.5/49.4		35.5/50.6		100.0	100.0
The lessons were supported with appropriate educational technologies.	Count	15/13	37/16	34/48	4/8	90/85	175
	% within descriptions	16.7/15.3	41.1/18.8	37.8/56.5	4.4/9.4	100.0	100.0
	Combined	57.8/34.1		42.2/ 65.9		100.0	100.0

G/P = G - represents Government, P stands for Private, and * refers 100%.

As shown in Table 5.20, it was found that in both government and private institutions, most respondents, 93.3% and 70.6% respectively agreed that the main body of the text was logically sequenced. Most respondents in government institutions (84.5%) and private institutions (54.2%) agreed that frequent reinforcements were available, while a significant proportion of private respondents (45.8 %) expressed that the materials did contain reinforcements, cases and relevant experiences that could strengthen the clarity of the contents. Concerning feedback devices, most of the respondents from both government and private institutions indicated that their learning

materials included feedback on the activities; however, a significant number of private respondents (42.3%) disagreed on the availability of feedback devices. Regarding the language used in the modules, a large percentage of respondents in government institutions (80.0%) and private institutions (77.7%), indicated that it was simple and understandable. Similarly, most student respondents, 75.5% (government) and 56.4% (private) agreed that the learning materials encouraged them to read critically. A significant percentage of respondents, 24.4% from government institutions and 43.6% from private institutions, indicated that their modules did not support critical reading. A larger percentage of respondents from government institutions, 75.5%, stated that their modules communicated with them directly while it was 56.4% for the private institutions' respondents.

Most students in government institutions, 74.5%, and 61.2% in private institutions said that they consulted dictionaries frequently to understand the words used in their learning materials. However, 38.8% of student respondents in private institutions and 25.5.2% in government institutions mentioned that they were not made to consult dictionaries and other reference materials. As reflected in Table 5.20, most respondents in private and government institutions, 64.7% and 57.8% respectively, responded that their modules were not interesting, while 42.2% from government and 35.3% from private HEI said their modules were interesting and motivated them in their learning.

Regarding the content of the lessons, 63.3% of respondents from government institutions stated that their modules presented it in a friendly manner. In comparison, 51.7% of student respondents in private institutions indicated that their modules did not discuss subject matter in a friendly manner. However, 48.2% of them agreed that it was friendly. It is however clear in the table that a significantly large number of respondents (90%) in government institutions and 84.8% in private institutions indicated that the modules presented the subject matter systematically.

Some 84.7% of the student respondents from the private institutions and 77.7% of government institutions emphasised that they were advised to work on the in-text questions (IQ), Self-check Exercises (SCE) and activities included in the learning materials. Table 5.20 also shows that larger number of respondents, from the government institutions (67.7%) and private institutions (55.3%), respectively, said their learning modules presented the content in a simple language that they could grasp. A significant number of students from private institutions, 44.7% and 32.3.0% from government institutions, indicated that the language used was complex because the words used

were difficult. This caused students to lose interest in reading and demotivated them from studying.

Table 5.20 displays that most respondents, government institutions (64.5%) and private institutions (49.4%), agreed that their modules presented the lessons clearly, while 50.6% and 35.5% respectively keeping same order, rejected the idea that the lessons were presented clearly. In addition, most respondents (65.9%) from private institutions disagreed that their learning was supported with educational technologies, while 57.8% of those in government institutions suggested that it was. Similarly, 42.2% of respondents from government institutions said their lessons did not involve technologies, while 34.1% of those from private institutions agreed that their lessons were supported with technologies.

5.3.3.5 Student respondents' understanding of the availability of hints and guidance in study materials

It seems that most student respondents received some support in the form of guidance and hints in their learning materials either fully or partially.

Table 5.21: Distribution of student respondents' responses on the availability of hints and guidance in the study materials

Responses		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov.	Priv.	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	Yes, in all of them	37	34	41.1	40.0	41.1	40.0	41.1	40.0
	No at all	17	11	18.9	12.9	18.9	12.9	60.0	52.9
	Only in some of them	36	40	40.0	47.1	40.0	47.1	100.0	100.0
Total		90	85	100.0	100.0	100.0	100.0		

As Table 5.21 reflects, the majority (47.1%) of student respondents in private institutions said hints and guidance were included in some of the study materials, while 41.1% of those in government institutions said their modules contained guidance and hints.

5.3.3.6 Student respondents' understanding of whether cover pages of the modules carry full descriptions

Table 5.22 displays the levels of agreement of the students regarding the availability of descriptions of courses/modules on cover pages.

Table 5.22: Distribution of responses of student respondents on the availability of descriptions of courses/modules on cover pages

Responses		Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov.	Priv.	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
Valid	Yes, all of them had all information clearly and fully on their cover pages.	69	67	76.7	78.8	76.7	78.8	76.7	78.8
	Only some of the courses had all such information on their cover pages.	21	18	23.3	21.2	23.3	21.2	100.0	100.0
	Total	90	85	100.0	100.0	100.0	100.0		

An analysis of Table 5.22 shows that most student respondents (78.8%) at private institutions and (76.7%) at government institutions confirmed that all their modules carried all the necessary information clearly and fully on the cover pages. A considerable number of respondents from both types of institutions indicated that only in some of the modules that the necessary description of the courses/modules were included on their cover pages.

5.3.3.7 Actions taken by student respondents to understand courses without descriptions

Table 5.23 presents qualitative data from open-ended questions that have been quantified or expressed in numbers.

Table 5.23: Distribution of student respondents' responses on the actions they took to become clear about courses/modules failing to carry descriptions

Types of actions taken	N of respondents WRT their respective institutions & percentile expression			
	AAU (%)	KEU (%)	UU (%)	RGCOVL (%)
Referred related books.	4 (8.0)	18 (45.0)	8 (17.8)	5 (12.5)

Types of actions taken	N of respondents WRT their respective institutions & percentile expression			
	AAU (%)	KEU (%)	UU (%)	RGCOVL (%)
Browsed websites/internet	4 (8.0)	2 (5.0)	3 (6.7)	3 (7.5)
Requested colleagues	3 (6.0)	--	--	4 (10.0)
Contacted my department and the university	5 (10.0)	--	2 (4.4)	--
Contacted the course instructor	3 (6.0)	1 (2.5)	1 (2.2)	2 (5.0)
Contacted the tutor during face-to-face session	5 (10.0)	5 (12.5)	12 (26.7)	7 (17.5)
Contacted the coordinator and got assistance	1 (2.0)	--	1 (2.2)	7 (17.5)
No modular material was provided	4 (8.0)			
Total responses in %	58.0	65.0	60.0	70.0

N = Number, WRT = With Respect To...

The total responses show that more than half of the respondents said they took action to clarify information in the courses that lacked descriptions. From a comparison made between the private institutions, students from RGCOVL indicated that they tried their best to get clear directions on the courses, while a comparison made between government and private institutions revealed that private institutions did better than government institutions.

5.3.3.8 Student respondents' understanding of the stimulating nature of the colour and binding of the course materials for reading

As research shows, the modules are some of the learning resources that learners are expected to spend most of their time on. Hence, the materials should be prepared in such a way that they look attractive and encourage the learner to keep reading.

Table 5.24: Distribution of responses of student respondents on the stimulating nature of the colour and binding of the courses

Valid	Response type	Frequency		Percent		Valid Percent		Cumulative Percent	
		Gov.	Priv.	Gov.	Priv.	Gov.	Priv.	Gov.	Priv.
	Yes	30	26	33.3	30.6	33.3	30.6	33.3	(30.6)
	No	60	59	66.7	69.4	66.7	69.4	100.0	100.0
	Total	90	85	100.0	100.0	100.0	100.0		

As shown in Table 5.24, larger many respondents (66.7%) (government institutions) and 69.4% in private institutions stated that their learning materials were not stimulating for reading and this was expected to have negative effect on the completion of the courses.

5.3.3.9 Reactions of student respondents to the effects of non-stimulating modules on their learning

Table 5.25 describes the open-ended questions (qualitative data) transcribed into numbers (quantitative forms).

Table 5.25: Distribution of responses of the student respondents on the effects non-stimulating modules created on their learning.

Types of effects created	N of respondents WRT their respective institutions & percentile expression			
	AAU (%)	KEU (%)	UU (%)	RGCOVL (%)
Mostly froze the interest to learn and pushing to drop out.	4 (8.0)	5 (12.5)	--	--
Demotivated to keep studying.	5 (10.0)	2 (5.0)	1 (2.2)	4 (10.0)
Reduced the interest to read.	10 (20.0)	8 (20.0)	12 (26.7)	8 (20.0)
Brought about an irregular study habit.	--	--	1 (2.2)	
Almost always, discouraged to get started to read.	3 (6.0)	2 (5.0)	2 (4.4)	
The non-appealing nature of the materials reduced the appetite for learning.	--	7 (17.5)	7 (15.6)	1 (2.5)
Learning materials were in soft copies.	8 (16.0)	--	--	--
Total responses in%	44.0	60.0	48.9	32.5

The total percentile response of the government institutions (AAU & KEU) shows that a significant percentage of the respondents, 44.0% and 60.0% respectively were affected by the non-stimulating learning materials they were given. Similarly, 48.9% and 32.5% of students from the private institutions, RGCVC and UU, respectively were also affected by the non-stimulating colour and binding of the learning materials. Across the institutions, more than 20% of students replied that their interest in reading their learning materials was reduced. As shown in the table, 16% of students from AAU said that they were not provided with modular materials in print form; they were given soft copies which I found while analysing the learning materials in the qualitative section of the study, were not prepared following the modality of SIM. Responses of this group agreed with the analysis made on the documents.

5.3.4 Student Respondents' Understanding of the Structure of Course Modules

5.3.4.1 Student respondents' understanding of the purpose of introductions in courses/modules/units

The dependent variable for this study was the quality of DL modules, and students' understanding of the structures of learning materials, the purposes served by the structures, the knowledge of CW and programme coordinators' on ODL and the professional skills of the CW were the independent variables. The relationships existing between the independent and dependent variables were investigated, using Chi-square (χ^2) in line with Frimodig's (2020:1) submission that the χ^2 test can be used to see if there is any relationship between any two independent variables in categorical data. In a χ^2 analysis, the p-value is the probability of obtaining a χ^2 as large or larger than that in the study being conducted. In most analyses carried out in this research, the value of a χ^2 was found to be larger than the critical values in the χ^2 distribution table. Hence, the findings were taken to be valid. In most cases, a p-value of 0.05 or greater is considered critical, and anything less than this value indicates significant deviations. The 0.05 level of significance is not an absolute rule that must be followed in all cases, but it should be applicable to most types of investigations likely to be conducted in the social sciences (O'Rourke et al., 2005:18).

As the IBM SPSS analyses conducted in this section show, the p-value of this study ($p < 0.001$) has been found to be less than the critical value, which makes the output generated significantly valid. Subsequently, the analyses were carried out to investigate the types of structures of learning materials vis-à-vis the purposes they served.

It should be noted that the analyses provided for the tables have used combined totals for Agree/Strongly Agree and Disagree/Strongly Disagree.

Table 5.26: Student respondents' understanding of the nature and purpose served by introductions of courses/modules/unit

Nature and purpose served by the introductions		Understanding of students about the purposes served by the introductions				
		SA	A	DA	SDA	Total
Introduced me to what depth the course is dealt.	Count	43	86	40	6	175
	% within purposes	24.6	49.1	22.9	3.4	100.0
	Combined	73.7		26.3		100.0
Advised me to allot study hours for all learning tasks	Count	32	52	81	10	175
	% within purposes	18.3	29.7	46.3	5.7	100.0
	Combined	48.0		42.0		100.0
Advised me to evaluate progress of learning	Count	39	68	57	11	175
	% within purposes	22.3	38.9	32.5	6.3	100.0
	Combined	61.2		38.8		100.0
Consisted of reminding note how long to spend working on modules	Count	13	75	75	12	175
	% within purposes	7.4	43.3	43.3	6.0	100.0
	Combined	50.7		49.3		100.0
Encouraged me to link my previous knowledge to what I was learning	Count	52	78	40	5	175
	% within purposes	29.7	44.5	22.9	2.9	100.0
	Combined	74.2		25.8		100.0
Explained relevant points from previous study.	Count	67	90	12	6	175
	% within purposes	38.3	51.4	6.9	3.4	100.0
	Combined	89.7		10.3		100.0
Included opportunities to enable me to recall my prior learning.	Count	45	93	32	5	175
	% within purposes	25.7	53.1	18.3	2.9	100.0
	Combined	78.8		21.2		100
Informed me about the forthcoming lesson.	Count	40	82	47	6	175
	% within purposes	22.9	46.9	26.8	3.4	100.0
	Combined	69.8		30.2		100.0
	Count	42	102	29	2	175
	% within purposes	24.0	58.3	16.6	1.1	100.0

Nature and purpose served by the introductions		Understanding of students about the purposes served by the introductions				
		SA	A	DA	SDA	Total
Informed me clearly & systematically what to learn	Combined	82.3		17.7		100.0
	Count	36	89	38	12	175
Informed me how to use the course materials	% within purposes	20.6	50.8	21.7	6.9	100.0
	Count	36	89	38	12	175
Nature and purpose served by the introductions		Understanding of students about the purposes served by the introductions				
		SA	A	DA	SDA	Total
	Combined	71.4		28.6		100.0
	Count	28	107	31	9	175
Informed me to refer feedbacks to SCE & activities in the modules	% within purposes	16.0	61.2	17.7	5.1	100.0
	Combined	77.2		22.8		100.0
Advised me not to be tempted to refer to feedback prior to my trials.	Count	27	63	71	14	175
	% within purposes	15.4	36.0	40.6	8.0	100.0
	Combined	51.4		48.6		100.0
	Count	45	74	50	6	175
Their nature was similar to other conventional textbooks' introduction	% within purposes	25.7	42.3	28.6	3.4	100.0
	Combined	68.0		32.0		100.0
Total	Count	509	1059	603	104	2275
	% within purposes	22.4	46.5	26.5	4.6	100.0
	Combined	68.9		31.1		100.0

[Note: $\chi^2 = 210.53$; $df = 36$; $p < 0.001$]

As depicted in Table 5.26, a significant number of student respondents (73.7%) agreed that their learning materials introduced them to the depth of the courses. However, some 26.3% of student respondents disagreed with the statement. Some 42% of respondents rejected the suggestion that their learning materials advised them to budget time to manage time properly for effective study while 48% agreed with this statement. Furthermore, most student respondents (61.2%) agreed that they were advised to evaluate their progress in learning, while 38.8% rejected the proposition.

Regarding a reminder note that was supposed to inform students how long to spend working on the modules, the number of respondents who disagreed (48.3%) was slightly smaller than those who agreed (49.7%).

Concerning the links that the SIM should make between the previous learning/knowledge and what was being learned, 74.2% of the respondents agreed that their modules encouraged them to create links between what they were studying with their previously acquired knowledge. However, 25.8% of them rejected this opinion.

Regarding the information that can be used to predict the forthcoming lesson, 69.8% of the respondents agreed that their learning materials highlighted the lessons that would follow, while 30.1% disagreed. Students were also invited to share their opinions on whether they were guided on how to use the course materials for successful studying. Accordingly, 71.45% of the respondents confirmed that their learning materials consisted of information intended for effective learning. Considering the critical aspects of the SIM, the respondents were also asked whether their learning materials provided feedback on the SCE and activities and whether they were informed to refer to them in the modules. Altogether, 77.1% of them confirmed that they were informed about the availability of feedback on SCE and activities. Moreover, the respondents were also asked whether their materials consisted of advice to keep themselves away from the temptation of referring to feedback ahead of their attempts. Accordingly, 51.4% stated that such advice was included; however, a significant number of respondents, 48.6%, suggested that their learning materials did not encourage them to avoid this temptation. Finally, this study tried to determine how the student respondents understood the differences between their learning materials and those used by conventional HEI. The larger proportion of respondents, 68%, understood that the nature of their learning materials was similar to the textbooks used in conventional HEI, while they were also meant to promote independent/self-learning. In general, it can be concluded that student respondents were served significantly, 68.9%, by the access devices: introductions of the courses, the modules and the unit.

5.3.4.2 Student respondents' understanding of the nature and purpose of course, module and unit objectives

Students were asked to rate several statements regarding the nature and purpose served by the objectives at the course, modular and unit level on a 4-point Likert scale. The results are indicated in Table 5.27.

Table 5.27: Student respondents' understanding on the nature and purpose served by the objectives

Nature and purpose served by learning objectives		Understanding of students about the purposes served by the objectives				
		SA	A	DA	SDA	Total
Both course and module objectives were always same	Count	27	72	63	13	175
	% within purposes	15.4	41.2	36.0	7.4	100.0
	Combined	56.6		43.4		100.0
It was boring for me to find them now and then in the course materials	Count	13	68	81	13	175
	% within purposes	7.4	38.9	46.3	7.4	100.0
Nature and purpose served by learning objectives		Understanding of students about the purposes served by the objectives				
		SA	A	DA	SDA	Total
	Combined	46.3		53.7		
The objectives provided me clear goals of my study	Count	66	80	28	1	175
	% within purposes	37.7	45.7	16.0	0.6	100.0
	Combined	83.4		16.6		100.0
There were statements of objectives which were framed to acquire skills	Count	23	62	83	7	175
	% within purposes	13.2	35.4	47.4	4.0	100.0
	Combined	48.6		51.4		100.0
They assisted me to organise learning activities more efficiently	Count	20	96	54	5	175
	% within purposes	11.4	54.9	30.9	2.8	100.0
	Combined	66.3		33.7		100.0
They enabled me to evaluate my progress of learning	Count	32	60	76	7	175
	% within purposes	18.3	34.3	43.4	4.0	100.0
	Combined	52.6		47.4		100.0
They helped me to manage my study hours and to reduce misdirected efforts	Count	20	36	114	5	175
	% within purposes	11.4	20.6	65.2	2.8	100.0
	Combined	32		68		100.0
They were framed to achieve knowledge	Count	32	110	27	6	175
	% within purposes	18.3	62.9	15.4	3.4	100.0
	Combined	81.2		18.8		100.0
They were framed to bring change of behaviour/attitude	Count	25	108	37	5	175
	% within purposes	14.3	61.7	21.2	2.8	100.0
	Combined	76		24		100

Nature and purpose served by learning objectives		Understanding of students about the purposes served by the objectives				
		SA	A	DA	SDA	Total
They were similar to other statements of the course content	Count	33	75	55	12	175
	% within purposes	18.8	42.9	31.4	6.9	100.0
	Combined	61.7		38.3		100.0
They were stated clearly and sufficiently in detail	Count	43	50	81	1	175
	% within purposes	24.6	28.5	46.3	0.6	100.0
	Combined	53.1		46.9		100.0
Total	Count	334	817	699	75	1925
	% within purposes	17.4	42.4	36.3	3.9	100.0
	Combined	59.8		40.2		100.0

([Note: $X^2 = 279.2$; $df = 30$; $p < 0.001$])

As shown in Table 5.27, 56.6% of student respondents agreed that the course and module objectives were aligned, while 43.4% disagreed. Concerning articulation of clear goals in the statements of objectives, 83.4% respondents agreed that the statements of objectives gave them clear goals of their study. Regarding the nature of the statements of objectives to have been framed to acquire skills, the majority of respondents, 51.4%, disagreed on the availability of objectives framed as such, while 48.6% of the student respondents agreed in this regard. In relation to the services students obtained from the objectives for organising their learning activities more efficiently, most respondents, 66.3%, agreed to have received the assistance from the objectives, while significant number of respondents, 33.7% rejected the proposition. As the basic device to check the progress in learning, the objectives are included in the learning materials of ODL or textbooks of conventional schools. Accordingly, students were asked whether the statement of objectives enabled them to evaluate their learning progress. In response, 52.6% of respondents said they were able to assess their learning progress, while 47.4% disagreed. Learning objectives are meant to direct the learner to manage their study time. Accordingly, students were asked whether they assisted them. The majority (67.9%) said the statements of objectives did not help them to manage their study hours and minimise distractions.

Learning objectives are devices used as checks and balances for the learning process and are meant to plan the knowledge, attitudes and skills to be learned from the content of a course. With this fact in mind, students were asked whether they encountered statements of objectives that were framed to check their knowledge of the content discussed. Some 71.2% of them agreed with the statement that learning objectives were framed in a way that sought to help them acquire

knowledge of the content. Similarly, 76% of them said the statements of objectives were framed to effect a change of behaviour in the learner. Regarding the nature of the statements of objectives, 53.1% of the respondents agreed that the objectives were clearly and sufficiently stated and thus, they could manage their learning properly. However, the remaining 46.7% disagreed with the statement, which suggests that they might have faced difficulties in managing their learning properly. In general, most student respondents (59.8%) agreed that they benefited significantly from the statements of objectives, while 40.1% disagreed.

5.3.4.3 Students' understanding of the availability of in-text questions

Student respondents were also asked to share their experiences regarding the in-text questions their learning materials were supposed to consist of. Table 5.28 presents their responses represented with their level of agreement.

Table 5.28: Levels of agreement among student respondents on the availability of IQ

	Level of agreement	IQ were included in the modules			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SDA	125	71.4	71.4	71.4
	DA	12	6.9	6.9	78.3
	A	38	21.7	21.7	100.0
	Total	175	100.0	100.0	

As indicated in Table 5.28, a large percentage of students (78.3%), responded that their learning materials did not consist of IQ which facilitate learning and motivate learners to keep studying. Students could be helped to pause from reading and check their progress to see if there is a positive alignment with the learning objectives of the lesson where the IQ are incorporated.

5.3.4.4 Students' reactions towards working on the Intext Questions (IQ)

The experiences of those student respondents (who agreed on the availability of IQ in Table 5.28) regarding working on IQ are presented in Table 5.29.

Table 5.29: Distribution of reactions of student respondents (n = 38) towards working on in-text questions (IQ)

Response types		Working on in-text questions			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	39.5	39.5	39.5
	No	10	26.3	26.3	65.8
	Only some of them	13	34.2	34.2	100.0
Total		38	100.0	100.0	

Among the students who responded in Section 5.3.4.3 (38 [21.7%]) on the availability of IQ, as indicated in Table 5.29, only 15 (39.5%) of them did all the IQ, while 13 (34.2%) said they did some of the IQ included in the course materials. Referring to the number of student respondents who said IQ were available in their learning material, 10 (26.3%) students did not attempt the IQ. Some 38 of the respondents were from one of the private institutions called Renaissance Global College of Open and Virtual Learning.

5.3.4.5 Student respondents' reasons for ignoring and not doing some of the IQ

Student respondents were also requested to reason out the reasons behind for not doing some of the IQ and for ignoring them. Table 5.30 displays the suggestions of the student respondents regarding this question.

Table 5.30: Student respondents' reasons for ignoring or not doing some in-text questions

Reasons proposed by (n = 23) respondents	N	Percentage (%)
Most of them were time-consuming	4	17.40
Some of them did not consist of answers in the learning materials	5	21.74
Some of them were complicated and confusing	4	17.40
Significant number of them were repetitions and irrelevant to a lesson	3	13.04
Some of them were not challenging	3	13.04
Some of them were not accompanied by feedback	4	17.40
Total responses in %	23	100.0

As it is indicated in Table 5.30, among those who gave reasons for not doing some of the IQ or ignored all of them, most of them suggested that the IQ were not followed by the assumed answers or there were no answers found in the modules. While the IQ are supposed to give the

learner a break, a pause from reading and to check whether they are following through, students found them to be time-consuming, complicated and repetitive.

5.3.4.6 Students' understanding of the nature and place of in-text questions

An analysis for this category was made based on the students who responded about the availability of IQ in their learning materials as displayed in Table 5.31.

Table 5.31: Distribution of level of agreements of student respondents on the nature and place of in-text questions in the modules

Students' understanding of nature & place of IQ		Level of agreement of respondents				
		SA	A	DA	SDA	Total
They were placed immediately after some whole idea or concept within a section of a unit of each module.	Count	3	5	10	20	38
	% within nature	7.9	13.2	26.3	52.6	100.0
	Combined	21.1		78.9		100.0
Students' understanding of nature & place of IQ		Level of agreement of respondents				
		SA	A	DA	SDA	Total
They required me to stop reading and think about what I read so far.	Count	4	13	11	10	38
	% within nature	10.5	34.2	29.0	26.3	100.0
	Combined	44.7		55.3		100.0
They required me to relate my personal experience with my reading or learning.	Count	5	10	20	3	38
	% within nature	13.2	26.3	52.6	7.9	100.0
	Combined	39.5		60.5		100.0
They enabled me to have a dialogue virtually with my instructors.	Count	4	4	15	15	38
	% within nature	10.5	10.5	39.5	39.5	100.0
	Combined	21.0		79.0		100.0
They required me to think about the topic or the lesson that would follow next.	Count	5	10	13	10	38
	% within nature	13.2	26.3	34.2	26.3	100.0
	Combined	39.5		60.5		100.0
They helped me to deepen my understanding of a lesson.	Count	4	15	15	4	38
	% within nature	10.5	39.5	39.5	10.5	100.0
	Combined	50.0		50.0		100.0
It was boring to find them now and then in the course materials.	Count	3	10	20	5	38
	% within nature	7.9	26.3	52.6	13.2	100.0
	Combined	34.2		68.8		100.0

Table 5.31 shows that, out of a total of 38, most of the respondents replied that the IQ were not placed immediately after some concepts within a section of a unit of each module (78.9%: SDA + DA) and did not guide them to stop their reading and check their progress of learning (55.5%). However, 44.7% of them said that the IQ helped them to check their learning progress and take a break from their reading. Similarly, 79.0% of the respondents believed that the IQ did not help them to communicate virtually with their instructors. This is because the materials were not prepared as though they were having a conversation with their instructors which is meant to avoid the loneliness of the learner and to keep them engaged emotionally with the course material.

5.3.4.7 Students' choice of time of working on IQ

The analysis for students' choice of time of working on IQ is made based on the respondents who had worked on the IQ. Table 5.32 presents the choice of working time of students on IQ.

Table 5.32: Distribution of level of agreement of respondents on their choice of time for working on IQ

Students' choice of time of working on IQ		Level of agreement of respondents				
		SA (%)	A (%)	DA (%)	SDA	Total (%)
I worked on them whenever I came across them.	Count	8	20	7	3	38
	% within choice	21.1	52.6	18.4	7.9	100.0
	Combined	73.7		26.3		100.0
I worked on them after completing a unit of study.	Count	9	20	6	3	38
	% within choice	23.7	52.6	15.8	7.9	100.0
	Combined	76.3		23.7		100.0
I worked on them after completing a module.	Count	6	17	11	4	38
	% within choice	15.8	44.7	29.0	10.5	100.0
	Combined	60.5		39.5		100.0
I worked on them after completing a course.	Count	3	17	11	7	38
	% within choice	7.9	44.7	29.0	18.4	100.0
	Combined	52.6		47.4		100.0
I worked on them when I needed to revise a lesson.	Count	10	19	6	3	38
	% within choice	26.3	50.0	15.8	7.9	100.0
	Combined	76.3		23.7		100.0

As indicated in Table 5.32, the larger proportion of students agreed that they had worked on IQ after completing a unit of a study and whenever they needed to revise a lesson learned, each carrying 76.3%. A significant percentage of respondents (73.7%) stated that they attempted the questions whenever they came across them in the text. In total, the student respondents who worked on the IQ seemed to follow the required approach to strengthen their understanding of the lesson they were studying.

5.3.4.8 Student respondents' understanding of the nature and place of white space left in the learning materials

As Table 5.33 shows, most student respondents (65.7%) agreed that they had been advised to work on separate sheets of paper, while 34.3% of them disagreed with the statement. Regarding the white space left in the learning materials for doing exercises and activity questions, 53.2% of respondents disagreed that white spaces were left only for activity questions and problems, while 46.8% agreed.

A similar question was posed to student respondents to find out whether they dealt with the in-text questions within their learning materials. In response, 57.2% of them agreed that they had used white spaces left only for IQ, while 42.8% rejected the statement. As one of the access devices required by SIM, the respondents were asked whether their learning materials provided them with white spaces to work on SCE. Though the difference is narrow, 52.53% of them indicated that their learning modules had white spaces for the SCE only, while 47.43% disagreed. They were also asked to judge the appropriateness of white spaces left in their learning materials. Some 70.3% of them disagreed that their modules included white spaces for every type of task left in the course materials, while 29.7% agreed. Some 55.3% respondents agreed that they benefitted from them, while 44.7% said they did not.

Table 5.33: Student respondents' understanding on the nature & place of white space left in the modules

Nature & place of white space provided		Students' understanding of nature and place of white space				
		SA	A	DA	SDA	Total
I was advised to work on exercises on a separate sheet of paper.	Count	29	86	41	19	175
	% within choice	16.6	49.1	23.4	10.9	100.0
	Combined	65.7		34.3		

There was a space left only for activity questions and problems	Count	17	65	71	22	175
	% within choice	9.7	37.1	40.6	12.6	100.0
	Combined	46.8		53.2		
There was a space left only for in-text questions	Count	19	81	56	19	175
	% within choice	10.9	46.2	32.0	10.9	100.0
	Combined	57.1		42.9		100.0
There was a space left only for self-check exercises	Count	27	65	63	20	175
	% within choice	15.4	37.1	36.0	11.4	100.0
Nature & place of white space provided	Students' understanding of nature and place of white space					
		SA	A	DA	SDA	Total
	Combined	52.5		47.5		100.0
There were not enough spaces left for every type of task left in the course materials	Count	26	97	39	13	175
	% within choice	14.9	55.4	22.3	7.4	100.0
	Combined	70.3		29.7		100.0
There were enough spaces left for every type of task left in the course materials	Count	19	49	78	29	175
	% within choice	10.9	28.0	44.5	16.6	100.0
	Combined	38.9		61.1		100.0
Total	Count	137	443	348	122	175
	% within choice	13.1	42.2	33.1	11.6	100.0
	Combined	55.3		44.7		100.0

5.3.4.9 Student respondents' understanding of the nature, location and distribution of learning activities created in the learning materials

LA are the most important devices used in ODL learning materials. LA are included in the ODL materials to engage learners purposely with their learning materials. Learners might think that they are expected to memorise all the information in the learning materials set before them if the LA are not included (COL, 2005:84). In this section, the location and nature of LA are discussed in two separate sub-sections.

- Student respondents' understanding of the place and frequency of appearance of LA in learning materials

Table 5.34: Distribution of level of agreements of student respondents about the place of learning activities in the learning materials

Location and status of appearance of learning activities in the modules		Level of agreement of respondent students				
		SA	A	DA	SDA	Total
Learning activities were provided exactly after a lesson/a section of a unit of study.	Count	48	84	43	0	175
	% within location	27.4	48.0	24.6	0%	100
	Combined	75.4		24.6		100
Location and status of appearance of learning activities in the modules		Level of agreement of respondent students				
		SA	A	DA	SDA	Total
Learning activities were provided at the end of a unit of study.	Count	33	107	33	2	175
	% within location	18.9	61.1	18.9	1.1	100
	Combined	80.0		20.0		100
Learning activities were appearing frequently.	Count	16	91	60	8	175
	% within location	9.1	52.0	34.3	4.6	100
	Combined	61.1		38.9		100
Learning activities were dispersed.	Count	8	68	81	18	175
	% within location	4.6	38.8	46.3	10.3	100
	Combined	43.4		56.6		100

As indicated in Table 5.34, most student respondents (75.4%) replied that the LA were located at the end of a lesson, and a reasonable percent of them (24.6%) understood that their learning materials did not let them do the LA immediately after they finished reading through a lesson of a unit of study.

Students were also asked whether their learning materials required them to work on the LA when they completed a unit of a study. A large percentage of them (80%) acknowledged that their learning materials consisted of LA located at the end of each unit. Only 20% of them indicated that they did not find LA when they completed reading through a given unit of study.

Regarding the frequency of LA, 61.1% of respondents agreed that their learning materials consisted of LA that appeared frequently, while 43.4% responded that the LA were dispersed in their learning materials. Most respondents concurred that the LA were provided after a unit of study

was covered, while a significant percentage said the devices were provided after a small chunk of study of a unit was learned.

- Student respondents' understanding of the nature of LA

This sub-section analyses two important effects: types and structures of the LA separately and then fuses the discussion.

The central idea captured in Table 5.35 is that the learning materials consisted of LA and the types of questions used were mainly of fill in the blank, true/false, and short answer type items. The student respondents were also asked about the structure that their LA exhibited. They were asked whether the LA required them to recall, apply and analyse what had been taught, whether instructions were given to attempt the questions and if appropriate amount of time was provided to each set of activity.

Table 5.35: Distribution of level of agreement of student respondents on the types of questions set for learning activities

Type of questions set for learning activities		Students' understanding of types of learning activities				
		SA	A	DA	SDA	Total
Different types of questions were included	Count	55	89	28	3	175
	% within types	31.4	50.9	16.0	1.7	100
	Combined	82.3		17.7		100
There were fill in the blank item questions	Count	24	103	38	10	175
	% within types	13.7	58.9	21.7	5.7	100
	Combined	72.6		27.4		100
There were questions asking me to complete a graph/a diagram/a table	Count	19	67	83	6	175
	% within types	10.9	38.3	47.4	3.4	100
	Combined	49.2		50.8		100
There were true/false item questions	Count	13	107	43	12	175
	% within types	7.4	61.1	24.6	6.9	100
	Combined	68.5		31.5		100
They were all essay type questions	Count	14	60	77	24	175
	% within types	8.0	34.3	44.0	13.7	100
	Combined	42.3		57.7		100
	Count	28	51	84	12	175

Type of questions set for learning activities		Students' understanding of types of learning activities				
		SA	A	DA	SDA	Total
They were all multiple-choice type questions	% within types	16.0	29.1	48.0	6.9	100
	Combined	45.1		54.9		100
	Count	16	84	68	7	175
They were all short answer type questions	% within types	9.1	48.0	38.9	4.0	100
	Combined	57.1		42.9		100
	Count	169	561	421	74	1225
Total	% within types	13.8	45.8	34.4	6.0	100
	Combined	59.6		40.4		100

[Note: $X^2 = 168.0$; $df = 18$; $p < 0.001$]

As Table 5.35 shows, a large proportion of respondents (82.3%) agreed that their learning materials consisted of LA comprised of questions set in different types. Regarding the types of question items, fill in the blank item, true/false, and short answer type questions were rated first to third at 72.6%, 68.5% and 57.1% respectively. The respondents were also asked whether they were required to complete graphs, diagrams or tables or to work on essay type and multiple-choice types of questions as a learning activity. Most respondents (50.8%) disagreed with the statement, while 57.7% and 54.9% respectively disagreed that the essay and multiple-choice type questions were available in their learning materials. However, 49.2%, 42.3% and 45.1% said they had encountered questions asking them to label graphs/diagrams/tables and work on essays and multiple choices respectively. While these values are significant, when analysing the learning modules using the rubric, it was found that no modular material consisted of questions requiring learners to label diagrams, graphs or charts, but both essay-type and multiple-choice type questions were included significantly in the private higher learning modules.

- Student respondents' understanding of the structure of learning activities

Students were asked to respond about how the questions of the LA were prepared besides to requesting them to reflect about the types of learning activities. Their responses are displayed in Table 5.36.

Table 5.36: Distribution of level of agreement of student respondents on the structure of learning activities

Structure of learning activities		Students' understanding of the structure of learning activities				
		SA	A	DA	SDA	Total
An appropriate amount of time was provided to each set of activity.	Count	26	45	100	4	175
	% within structures	14.9	25.7	57.1	2.3	100.0
	Combined	40.6		59.4		100.0
There were demanding questions.	Count	20	63	82	10	175
	% within structures	11.4	36.0	46.9	5.7	100.0
	Combined	47.4		52.6		100.0
There were questions asking me to create something based on what I learned	Count	28	84	57	6	175
	% within structures	16.0	48.0	32.6	3.4	100.0
	Combined	64.0		36.0		100.0
There were questions asking me to put concepts in order	Count	36	72	62	5	175
	% within structures	20.6	41.1	35.4	2.9	100.0
	Combined	61.7		38.3		100.0
There were questions asking to collect data	Count	27	84	55	9	175
	% within structures	15.4	48.0	31.4	5.2	100.0
	Combined	63.4		36.6		100.0
There were questions requiring me to apply new concepts or principles	Count	34	46	83	12	175
	% within structures	19.4	26.3	47.4	6.9	100.0
	Combined	45.7		54.3		100.0
There were questions requiring me to explain the examples provided	Count	29	89	51	6	175
	% within structures	16.6	50.8	29.2	3.4	100.0
	Combined	67.4		32.6		100.0
There were questions requiring me to give examples from my own experience	Count	25	89	55	6	175
	% within structures	14.3	50.8	31.5	3.4	100.0
	Combined	65.1		34.9		100.0
There were questions requiring me to recall what has been taught	Count	48	102	20	5	175
	% within structures	27.4	58.3	11.4	2.9	100.0
	Combined	85.7		14.3		100.0
	Count	39	72	55	9	175
	% within structures	22.3	41.1	31.5	5.1	100.0

Structure of learning activities		Students' understanding of the structure of learning activities				
		SA	A	DA	SDA	Total
There were questions requiring me to report my own observations or experiences	Combined	63.4		36.6		100.0
They were all interesting to do.	Count	22	105	44	4	175
	% within structures	12.6	60.0	25.1	2.3	100.0
	Combined	72.6		27.4		100.0
They were constructed with clear and precise instructions	Count	41	77	47	10	175
	% within structures	23.4	44.0	26.9	5.7	100.0
	Combined	67.4		32.6		100.0
Total	Count	375	928	711	86	2100
	% within structures	17.8	44.2	33.9	4.1	100.0
	Combined	62.0		38.0		100.0

[Note: $X^2 = 169.0$; $df = 18$; $p < 0.001$]

As shown in Table 5.36, a large percentage of student respondents (85.7%) indicated that the questions derived from the LA were designed to facilitate a recall of what had been learned. The questions requiring students to explain ideas and construct their own examples were rated second and third at 67.4% and 65.1% respectively. The questions requiring the application of new concepts or principles and those demanding higher levels of understanding were not included in the learning activity as confirmed by the responses: 54.3% and 52.6% respectively. Furthermore, 67.4% of respondents agreed that the instructions were provided, clear and precisely constructed. However, most student respondents (59.4%) said enough time was not provided for each set of activity.

As indicated in Table 5.36, the LA were structured in such a way that the questions encouraged memorisation of content with some parts that required students to exercise extrapolation. Though the instructions were provided for working on these aspects, it was not specified how long a learner should spend working on them.

- Student respondents' choice of time for working on LA

In addition to identifying the types and structures of the LA, student respondents were also asked when they preferred to work on the LA. Their responses are presented in Table 5.37.

Table 5.37: Distribution of choice of student respondents for time of working on learning activities

Time of working on learning activities		Level of agreement students on time of working					
		SA	A	DA	SDA	NR	Total
I tried to work on them whenever I found them.	Count	38	92	43	2	0	175
	% within time	21.7	52.6	24.6	1.1	0.0	100.0
	Combined	74.3		25.7		0.0	100.0
I tried working on them after I finished a unit of study.	Count	37	99	33	5	1	175
	% within time	21.1	56.6	18.9	2.8	0.6	100.0
	Combined	77.7		21.7		0.6	100.0
I tried working on them after completing a module of a course.	Count	26	80	52	11	6	175
	% within time	14.9	45.7	29.7	6.3	3.4	100.0
	Combined	60.6		36.0		3.4	100.0
I tried working on them after completing a course.	Count	35	50	71	13	6	175
	% within time	20.0	28.6	40.6	7.4	3.4	100.0
	Combined	48.6		48.0		3.4	100.0
I worked on them whenever I needed to revise a lesson.	Count	43	87	30	10	5	175
	% within time	24.6	49.7	17.1	5.7	2.9	100.0
	Combined	74.3		22.8		2.9	100.0

Note: - NR = No response

As Table 5.37 shows, the majority (77.7%) said after completing a unit of study. Students also rated the responses: whenever they came across LA and when they needed to revise lessons second with a percentage of 74.3% each and the response, after completing a module of a course, was rated third with 60.6%. Nearly, the same number of respondents were found to agree and disagree on the statement that asked them whether they attempted LA after the course was covered.

- Students' engagement and benefits of working on LA

The respondents were asked about the nature of their engagement and the types of benefits they obtained from working on the LA. Their responses are indicated in Table 5.38.

Table 5.38: Level of agreement of student respondents on their engagement types and benefits obtained from working on learning activities.

Types of engagement & benefits obtained		Level of agreement of respondent students				
		SA	A	DA	SDA	Total
They required me to apply what I learned in practical situations.	Count	44	84	40	7	175
	% engagement within	25.1	48.0	22.9	4.0	100.0
	Combined	73.1		26.9		100.0
They required me to discover new ideas.	Count	32	87	52	4	175
	% engagement within	18.3	49.7	29.7	2.3	100.0
	Combined	68.0		32.0		100.0
They required me to compare, differentiate, analyse, evaluate, judge and criticise concepts.	Count	49	67	53	6	175
	% engagement within	28.0	38.3	30.3	3.4	100.0
	Combined	66.3		33.7		100.0
They strengthened me to remain in my studying.	Count	46	91	33	5	175
	% engagement within	26.2	52.0	18.9	2.9	100.0
	Combined	78.2		21.8		100.0
They helped me to easily pass in the final examinations.	Count	33	85	49	8	175
	% engagement within	18.8	48.6	28.0	4.6	100.0
	Combined	67.4		32.6		100.0
None of them helped me to pass in the final examinations.	Count	32	26	88	29	175
	% engagement within	18.3	14.9	50.3	16.5	100.0
	Combined	33.2		66.8		100.0

As depicted in Table 5.38 below on the type of engagement they experienced, 73.1% of respondents agreed that they were required to apply what they had learned in practical situations, and this was rated first. The requirement to discover new ideas and the need to compare, differentiate, analyse, evaluate, judge and criticise concepts were rated second and third amounting to 68.0% and 66.3% respectively. Concerning the benefits obtained from their engagement in working on LA, most respondents (78.2%) agreed that they were motivated to work hard in their studies. A large percentage of respondents (67.4%) said such engagement benefited them. On the question of whether the LA helped them in their examinations, 66.8% of respondents agreed that they helped them to pass their final examinations.

5.3.4.10 Students' understanding of the nature, location, and benefits of working on self-check exercises (SCE) in the learning materials

Self-check exercises (SCE), also called self-assessment questions are very important components of ODL, as they have a diagnostic nature, and are usually placed at the end of a unit of study material. They are meant to serve as summative evaluation of a student's self-learning because of the limited time for student-tutor contact (COL, 2005:181).

Under this section, the whereabouts of SCE and their nature are analysed in two separate sub-sections starting with the location of SCE in the learning materials.

- Student respondents' understanding of the place/location of SCE in the learning materials

Student respondents gave their reflections regarding where they came across SCE while they were studying their distance learning modules. Their responses are presented in Table 5.39 below.

Table 5.39: Student respondents' understanding of the place/location of SCE

Location/place of SCE in the learning materials		Level of agreement of student respondents				
		SA	A	DA	SDA	Total
They were placed immediately after a lesson in a section.	Count	49	56	58	12	175
	% within location	28.0	32.0	33.1	6.9	100.0
	Combined	60.0		40.0		100.0
They were placed immediately after a unit.	Count	65	87	20	3	175
	% within location	37.1	49.7	11.5	1.7	100.0
	Combined	86.8		13.2		100.0

Location/place of SCE in the learning materials		Level of agreement of student respondents				
		SA	A	DA	SDA	Total
They were placed at the end of a module.	Count	31	72	61	11	175
	% within location	17.7	41.1	34.9	6.3	100.0
	Combined	58.8		41.2		100.0
They were placed only at the last module.	Count	23	31	96	25	175
	% within location	13.1	17.7	54.9	14.3	100.0
	Combined	30.8		69.2		100.0

As is indicated in Table 5.39, most student respondents (86.8%) agreed that the SCE were located immediately after a unit of study. On the other hand, significant percentages of respondents (60.0%) and (58.8%) indicated that the SCE were located immediately after a lesson of a section was covered and at the end of a module respectively.

In line with the research design, an analysis of modular learning materials was made concurrently using the rubric chosen for a triangulation purpose. The document analysis made in Section 5.4 shows that no modular materials used for this study consisted of SCE at the end of a module. It also shows that SCE were not included after the content of a lesson of a section was read and not even after a unit or the whole module of a course was studied.

- Students' understanding of the nature of SCE

Under this sub-section, I analysed two important effects, the structure and types of the SCE separately and then combined them through discussion.

- Students' understanding of the structure of SCE

This study required student respondents to share their understanding about the structure of SCE which were included in the learning materials to guide their learning. They were asked to state whether the SCE demanded them to recall, to apply and to discover new ideas based on what had been taught. In the questionnaire, they were asked to answer questions regarding the availability of instructions that could direct them how to attempt the questions and to check the provision of appropriate amount of time to work on each SCE. Accordingly, the responses have been organised in Table 5.40 below.

Table 5.40: Distribution of level of agreement of student respondents on the structure of SCE

Location/place of SCE in the learning materials		Level of agreement of student respondents				
		SA	A	DA	SDA	Total
Appropriate amount of time was provided to each set of activity	Count	25	20	100	30	175
	% within structure	14.3	11.5	57.1	17.1	100.0
	Combined	25.8		74.2		100.0
Most of them required me to recall what I learned	Count	52	113	6	4	175
	% within structure	29.7	64.6	3.4	2.3	100.0
	Combined	94.3		5.7		100.0
Some of them required me to apply what I learned in practical situations	Count	37	91	40	7	175
	% within structure	21.1	52.0	22.9	4.0	100.0
	Combined	73.1		26.9		100.0
Some of them require me to discover new ideas	Count	32	83	56	4	175
	% within location	18.3	47.4	32.0	2.3	100.0
	Combined	65.7		34.3		100.0
Total	Count	146	307	202	45	700
	% within structure	20.8	43.9	28.9	6.4	100.0
	combined	64.7		35.3		100.0

[Note: $X^2 = 205.7$; $df = 9$; $p < 0.001$]

As it is indicated in Table 5,40, almost all respondents, 94.3%, understood that the structure of the SCE questions was organised in a way that sought to enable the respondents to recall and remember the contents learned. A large percentage of respondents, 73.1%, stated that they understood that SCE were structured to assess whether they could apply the knowledge they acquired in practical situations. Though it was ranked third, a significant number of respondents agreed that they came across the SCE that checked their ability to discover new ideas. Regarding the length of time provided to work on SCE, the larger proportion of respondents, 74.2%, stated that sufficient time was not provided to effectively attempt each set of question.

A review of the analysis made under this section shows that the majority of respondents understood that the SCE were structured to encourage memorisation of subject matter with a reasonable number of them assessing how students could work out practical problems and discover new concepts. Similarly, though it is normal to provide instructions to students on how they could work on the questions, the amount of time each a learner should spend to practice

each question was not specified. ODL learners who are not properly guided on how to use their learning materials can drop out or fail to succeed in the required work within the set time.

- Students' understanding of the types of questions set for SCE

As it is mentioned above, student respondents were required to share their experiences regarding the question types of SCE. Their responses are organized in Table 5.41 below.

Table 5.41: Distribution of level of agreement of student respondents on the types of SCE

Types of questions of SCE		Level of agreement of students					
		SA	A	DA	SDA	NR	Total
Different types of questions were included	Count	69	77	24	5	0	175
	% within types	39.4	44.0	13.7	2.9	0.0	100.0
	Combined	83.4		16.6		0.0	100.0
They were all essay type questions	Count	24	66	75	8	2	175
	% within types	13.7	37.7	42.9	4.6	1.0	100.0
	Combined	51.4		47.5		1.0	100.0
They were all multiple type questions	Count	30	25	91	29	0	175
	% within types	17.1	14.3	52.0	16.6	0.0	100.0
	Combined	31.4		68.6		0.0	100.0
They were all short answer type questions	Count	16	59	73	27	0	175
	% within types	9.1	33.7	41.7	15.5	0.0	100.0
	Combined	42.8		57.2		0.0	100.0
Total	Count	139	227	263	69	0	698
	% within types	19.9	32.5	37.7	9.9	0.0	100.0
	Combined	52.4		47.6		0.0	100.0

[Note: $X^2 = 139.6$; $df = 9$; $p < 0.001$], NR = No response

As indicated in Table 5.41, 83.4% of respondents agreed that their learning materials consisted of the SCE comprised of questions set in different types. When a comparison was made across the question types, multiple-choice items were more, as 68.6% of the respondents confirmed this. Similarly, a significant number of respondents, 42.8% and 51.4%, stated that short answer type and essay type questions were also included in their learning materials, respectively.

- Students' engagement and benefits of working on SCE

Student respondents were also asked to answer questions regarding their engagement and benefits in working on the SCE. The responses of the students are presented in Table 5.42 as shown below.

Table 5.42: Distribution of level of agreement of student respondents on the engagement and benefits of working on SCE

Engagement & benefits of working on SCE		Students' engagement & benefits of working on SCE					
		SA	A	DA	SDA	NR	Total
They reinforced me to remain in my studying	Count	30	99	31	2	13	175
	% within engagement	17.2	56.6	17.7	1.1	7.4	100.0
	Combined	73.8		18.8		7.4	100.0
They helped me to easily pass in the final examinations	Count	36	81	41	4	13	175
	% within engagement	20.6	46.3	23.4	2.3	7.4	100.0
	Combined	66.9		25.7		7.4	100.0
They helped me to easily attempt assignments for submission	Count	30	35	45	52	13	175
	% within engagement	17.2	20.0	25.7	29.7	7.4	100.0
	Combined	37.2		55.4		7.4	100.0
None of them helped me to pass in the final examinations	Count	11	38	74	39	13	175
	% within engagement	6.3	21.7	42.3	22.3	7.4	100.0
	Combined	28		64.6		7.4	100.0

NR = No response.

As summarised in Table 5.42, most respondents (73.8%) (keeping in mind that 7.4% of 175 students did not respond to this set of questions) who replied that self-check exercises strengthened them to keep studying by enabling them to evaluate their level of understanding. Regarding the benefit they obtained from working on SCE, the majority of them (66.9%) indicated that they enabled them to pass their final examinations. In relation to the support SCE were supposed to give to students to easily attempt working on the assignment questions, most of the respondents, 55.4%, answered for not getting the assistance.

Most respondents seemed to be engaged working on SCE and were able to easily pass in their final exams as SCE helped them to continuously assess their progress of learning. Continual assessment of progress of their learning implies their active engagement in the learning process.

5.3.4.11 Students' understanding of the nature, adequacy and appropriateness of examples, figures/diagrams/graphs incorporated into the learning materials

This sub-section presents the analyses made on the relevance, adequacy and appropriateness of examples, graphs/diagrams provided in the modules and the actions taken by the student respondents on the incorrect examples and irrelevant graphs/diagrams incorporated in their learning materials on separate tables.

The responses of the student respondents about the relevancy, adequacy and appropriateness of examples included in their learning materials are presented in Table 5.43.

Table 5.43: Distribution of level of agreements of student respondents about the relevancy, adequacy and appropriateness of examples

Relevancy, appropriateness and adequacy of examples		Respondents' level of agreement				
		SA	A	DA	SDA	Total
There were relevant examples provided for each lesson.	Count	67	91	14	3	175
	% within examples	38.3	52.0	8.0	1.7	100.0
	Combined	90.3		9.7		100.0
Mostly the examples were short and concise	Count	38	113	21	3	175
	% within examples	21.7	64.6	12.0	1.7	100.0
	Combined	86.3		13.7		100.0
Mostly, the examples were clear-cut	Count	23	105	43	4	175
	% within examples	13.1	60.0	24.6	2.3	100.0
	Combined	73.1		26.9		100.0
Mostly, the examples were self-explanatory	Count	4	50	115	6	175
	% within examples	2.3	28.6	65.7	3.4	100.0
	Combined	30.9		69.1		100.0
There were adequate number of examples included for each lesson	Count	42	97	34	2	175
	% within examples	24.1	55.4	19.4	1.1	100.0
	Combined	79.5		20.5		100.0
I came across examples wrongly placed	Count	6	59	76	34	175
	% within examples	3.4	33.8	43.4	19.4	100.0
	Combined	37.2		62.8		100.0
Total	Count	180	515	303	52	1050
	% within examples	17.1	49.1	28.9	4.9	100.0
	Combined	66.2		33.8		100.0

[Note: $X^2 = 369.2$; $df = 15$; $p < 0.001$]

As Table 5.43 indicates, almost all the respondents (90.3%) agreed that their learning materials contained relevant examples for each lesson and 86.3% of student respondents answered the examples were short and precise. Though many respondents (79.5% & 73.1%) said the examples

were adequate and straightforward, respectively, a similar number of respondents (69.1%) replied that the examples were not self-explanatory. Moreover, though most respondents felt that the examples were placed correctly, some 37.2% reported that they had come across examples that were wrongly placed in the learning modules. Table 5.43 also shows that most respondents (66.2%) seemed to understand that the examples included in their learning materials were adequate in number and relevant, though not self-explanatory, which keep ODL students virtually connected with their instructor.

Regarding the relevance, adequacy and appropriateness of diagrams and graphs, the responses of the student respondents are presented in Table 5.44 below.

Table 5.44: Distribution of level of agreements of student respondents about the relevancy, adequacy, and appropriateness of diagrams/graphs

Relevancy and adequacy of diagrams & graphs		Respondents' level of agreement				
		SA	A	DA	SDA	Total
I came across a diagram/graph being irrelevant to the topic of interest	Count	25	75	56	19	175
	% within relevancy	14.2	42.9	32.0	10.9	100.0
	Combined	57.1		42.9		100.0
I came across a diagram/graph with wrong explanatory reference	Count	22	49	69	35	175
	% within relevancy	12.6	28.0	39.4	20.0	100.0
	Combined	40.6		59.4		100.0
The diagrams/graphs were accompanied by explanatory references	Count	16	35	124	0	175
	% within relevancy	9.1	20.0	70.9	0.0	100.0
	Combined	29.1		70.9		100.0
The diagrams/graphs were clear and recognisable	Count	23	106	40	6	175
	% within relevancy	13.1	60.6	22.9	3.4	100.0
	Combined	73.7		26.3		100.0
The diagrams/graphs were relevant to the topic under discussion	Count	18	133	18	6	175
	% within relevancy	10.3	76.0	10.3	3.4	100.0
	Combined	86.3		13.7		100.0
There were appropriate diagrams and graphs included whenever necessary	Count	37	97	38	3	175
	% within relevancy	21.0	55.4	21.7	1.7	100.0
	Combined	76.4		23.4		100.0
Total	Count	141	495	345	69	1050
	% within relevancy	13.4	47.1	32.9	6.6	100.0
	Combined	60.5		39.5		100.0

[Note: $X^2 = 287.7$; $df = 15$; $p < 0.001$]

As indicated in Table 5.44, a large number of respondents (86.3%) indicated that the graphs/diagrams included in their learning materials were relevant to the topic under discussion, and 73.7% of student respondents replied that the diagrams and graphs were drawn clearly to be recognisable by learners. By contrast, some 57.1% of respondents reported that they had found graphs and diagrams that were irrelevant to the topic of interest. Similarly, most respondents said the diagrams/graphs were accompanied by appropriate explanatory references. However, 40.6% of them indicated that they experienced graphs/diagrams with wrong explanatory references.

An analysis of data in Table 5.44 shows that the majority of respondents appreciated that the diagrams/graphs were relevant, adequate and contained explanatory references. However, some respondents indicated that some graphs/diagrams were irrelevant to the topic under discussion.

As mentioned in Section 5.3.4.11, the student respondents were also requested to share their experiences on the measures that they took to get timely corrections to incorrect examples, diagrams and graphs found in their learning materials, and their responses are presented in Table 5.45.

Table 5.45: Distribution of level of agreements on measures taken by student respondents on incorrect examples, graphs and diagrams found in the learning materials

Measures taken to get corrected wrong examples, graphs & diagrams		Students' level of agreement					
		SA	A	DA	SDA	NR	Total
I simply accepted them as correct because they were prepared by instructors.	Count	23	76	45	25	6	175
	% within measures	13.1	43.5	25.7	14.3	3.4	100.0
	Combined	56.6		40.0		3.4	100.0
I referred to other books and got correction to them.	Count	49	88	25	7	6	175
	% within measures	28.0	50.3	14.3	4.0	3.4	100.0
	Combined	78.3		18.3		3.4	100.0
I contacted a professional in the subject I was studying and got mistakes corrected.	Count	44	77	33	15	6	175
	% within measures	25.1	44.0	18.9	6.6	3.4	100.0
	Combined	69.1		25.5		3.4	100.0
I contacted my tutor via an email/over the telephone and got the mistakes corrected.	Count	9	84	65	10	7	175
	% within measures	5.1	48.0	37.2	5.7	4.0	100.0
	Combined	53.1		42.9		4.0	100.0
	Count	22	90	40	16	7	175

Measures taken to get corrected wrong examples, graphs & diagrams		Students' level of agreement					
		SA	A	DA	SDA	NR	Total
I contacted my tutor when face-to-face sessions were held and got the mistakes corrected.	% within measures	12.6	51.4	22.9	9.1	4.0	100.0
	Combined	64.0		32.0		4.0	100.0
I could not do anything; rather I was demotivated to keep learning.	Count	4	54	84	26	7	175
	% within measures	2.3	30.8	48.0	14.9	4.0	100.0
	Combined	33.1		62.9		4.0	100.0

NR = No response

As it is indicated in Table 5.45, comparing the choices of actions to get corrections to the incorrect examples and diagrams/graphs, referring to books other than their modules received the larger attention by student respondents (78.3%). Similarly, contacting professionals having related field of orientation, receiving support from a tutor while face-to-face classes were held during tutorial sessions, and connecting to the tutor via email and over the telephone were rated second, third and fourth receiving 69.1%, 64% and 53.1% respectively. A significant number of students (56.6%) accepted the incorrect examples, diagrams, and graphs as correct believing that the learning materials were prepared by their instructors with reputable mastery of the courses.

In total, the respondents found it appropriate to get mistakes corrected through different techniques such as using additional relevant books and contacting their tutors via emails/telephones. It also emerged that the respondents tended to believe course writers to a large extent. Some 33.1% of student respondents agreed that they were demotivated by incorrect examples and diagrams/graphs to study.

5.3.4.12 Students' understanding of the availability and nature of unit summary incorporated into the learning materials

A unit summary is a discussion highlighting important points covered under each unit of a module and is usually placed at the end of each unit of learning (COL, 2005:82). It is one of the key access devices incorporated into the ODL materials to promote self-learning. In this study, the student respondents were asked to share their understanding on the availability and nature of unit summaries in their learning materials. Their responses are depicted in Table 5.46 below.

Table 5.46: Student respondents' knowledge of the availability of a unit summary in their learning materials

Unit summary was included in their learning materials		Distribution of levels of agreement				
		Frequency	Percent	Combined	Valid Percent	Cumulative Percent
Valid	SDA	1	0.6	5.2	0.6	0.6
	DA	8	4.6		4.8	5.4
	A	93	53.1	90.8	55.4	60.7
	SA	66	37.7		39.3	100.0
Total		168	96.0		100.0	100.00
No response		7	4.0	4.0		
Total		175	100.0	100		

Table 5.46 shows that 90.8% of the student respondents knew about the inclusion of unit summaries in their learning materials, while seven of them did not respond to the question.

Regarding the nature and purpose of a unit summary, the student respondents were required to share their experiences and the views they reflected are displayed in Table 5.47. Only 168 of them responded to this set of questions.

Table 5.47: Distribution of level of agreements of student respondents about the nature and uses of a unit summary

Nature and uses of unit summary		Level of agreement of students				
		SA	A	DA	SDA	Total
They enabled me to normalise my study	Count	49	87	30	2	168
	% within nature	29.2	51.8	17.8	1.2	100.0
	Combined	81.0		19.0		100.0
They helped me to concentrate on the important points	Count	51	82	28	7	168
	% within nature	30.4	48.8	16.7	4.1	100.0
	Combined	79.2		20.8		100.0
They helped me to reflect on the work I was required to do in the course materials	Count	48	77	36	7	168
	% within nature.	28.6	45.8	21.4	4.2	100.0
	Combined	74.4		25.6		100.0
	Count	39	92	32	5	168

Nature and uses of unit summary		Level of agreement of students				
		SA	A	DA	SDA	Total
They reinforced the main learning points that have been covered	% within nature	23.2	54.7	19.1	3.0	100.0
	Combined	77.9		22.1		100.0
They supported me to carry out a further check up on my performance and to consider the next steps of learning	Count	20	65	75	8	168
	% within nature	11.9	38.7	44.6	4.8	100.0
	Combined	50.6		49.4		100.0
They were made in building examples in it.	Count	5	16	127	20	168
	% within nature	3.0	9.5	75.6	11.9	100.0
	Combined	12.5		87.5		100.0
They were made short, precise and comprehensive	Count	65	76	24	3	168
	% within nature	38.7	45.2	14.3	1.8	100.0
	Combined	83.9		16.1		100.0
They were reminding me of what I already learned	Count	44	109	11	4	168
	% within nature	26.2	64.9	6.6	2.3	100.0
	Combined	91.1		8.9		100.0
Total	Count	321	614	353	54	1342
	% within nature	23.9	45.8	26.3	4.0	100.0
	Combined	69.7		30.3		100.0

[$\chi^2 = 377.1$; $df = 21$; $p < .001$]

As it is displayed in Table 5.47, most respondents agreed with all the statements except for two that required them to say whether a unit summary supported them to carry out checkups on their performance and to consider necessary adjustments. This received nearly the same responses for positive and negative reflections. The respondents also disagreed with the statement that said a unit summary was prepared with examples built into it. However, 87.5% of respondents disagreed with the statement.

From Table 5.47 it is evident that a large number of student respondents had knowledge of the nature of the unit summaries and the support they provide to a distance learner.

5.3.4.13 Students' understanding of the availability and nature of feedback provided for exercises and activities built into learning materials

As the most critical access device that influences students' learning, the purpose of feedback is to identify the gaps ("How am I going?" relative to "Where am I going?") and to provide remediation

in the form of alternative or other steps (“Where to next?”) in the education process (Hattie & Timperley, 2007:102). It should explain to learners why the answers they provide to questions are correct or wrong and the rationale for the correct answers.

This section presents respondents’ responses on the availability and nature of feedback provided to set of questions in their learning materials and the measures taken to get incorrect feedback corrected in Table 5.48, Table 5.49, and Table 5.50.

Table 5.48: Distribution of level of agreements of student respondents about the availability of feedback in their learning materials

Knowledge of availability of feedback		Level of agreement of student respondents				
		SA	A	DA	SDA	Total
There was feedback to each of tasks left in the module.	Count	34	89	43	9	175
	% within knowledge	19.4	50.9	24.6	5.1	100.0
	Combined	70.3		29.7		100.0
The feedback was given immediately after I gave my answer to the questions	Count	9	31	120	15	175
	% within knowledge	5.1	17.7	68.6	8.6	100.0
	Combined	22.8		77.2		100.0

As indicated in Table 5.48, a large number of students (70.3%) agreed that their learning materials consisted of feedback to SCE and LA. However, 29.7% also replied that their modules did not carry feedback to exercises and activities in the modules. Similarly, a significant number of respondents (77.2%) said they did not receive feedback to their responses immediately after their attempts.

Regarding the nature and purpose of feedback provided in their learning materials, the participants’ responses are presented in Table 5.49.

Table 5.49: Distribution of levels of agreement of student respondents about the nature and uses of feedback provided in their learning materials

Nature and uses of feedback		Level of agreement of student respondents				
		SA	A	DA	SDA	Total
All the feedback was correct	Count	9	32	121	13	175
	% within feedback	5.2	18.3	69.1	7.4	100.0
	Combined	23.5		76.5		100.0
Some of the feedback was incorrect	Count	14	80	75	6	175
	% within feedback	8.0	45.7	42.9	3.4	100.0
	Combined	53.7		46.3		100.0
The feedback was discussing the logic behind the correct answers	Count	7	27	128	13	175
	% within feedback	4.0	15.4	73.2	7.4	100.0
	Combined	19.4		80.6		100.0
The feedback was explanatory as to why I made wrong answers	Count	7	22	134	12	175
	% within feedback	4.0	12.5	76.6	6.9	100.0
	Combined	26.5		83.5		100.0
The feedback was given in the form of 'right' or 'wrong' type	Count	50	75	30	20	175
	% within feedback	28.6	42.9	17.1	11.4	100.0
	Combined	71.5		28.5		100.0
The feedback was helpful to check my progress of learning	Count	15	45	50	65	175
	% within feedback	8.6	25.7	28.6	37.1	100.0
	Combined	34.3		65.7		100.0
There were only model answers to limited number of exercises & activities	Count	21	85	60	9	175
	% within feedback	12.0	48.6	34.3	5.1	100.0
	Combined	60.6		39.4		100.0
Total	Count	115	361	603	146	1225
	% within feedback	9.4	29.5	49.2	11.9	100.0
	Combined	38.9		61.1		100.0

[$\chi^2 = 403.978$; $df = 18$; $p < .001$]

As Table 5.49 shows, most respondents (60.6%) replied that only model answers to some of the exercises and activity questions were provided. In a similar vein, 53.7% of them said their learning materials consisted of incorrect feedback to some of the questions.

Furthermore, most student respondents (71.5%) said feedback was not comprehensive and was in the form of 'right or wrong' remarks only. This is strengthened by 83.5% of student respondents who replied that the feedback was not explanatory, lacking comments that accompanied the feedback as to why the students gave wrong answers. As a larger number of student respondents (80.6%) replied, no discussion was also made to teach students the logic behind correct answers provided to the exercises and activities included in the learning materials.

Most respondents (65.7%) indicated that they did not find the feedback helpful with its current structure to assess their progress in learning.

One of the dimensions of this study is getting the respondents' views on what they did to correct incorrect feedback. Their responses are presented in Table 5.50 below.

Table 5.50: Distribution of level of agreements of student respondents on the measures taken on incorrect feedback found in their leaning materials

Measures taken to get corrected wrong feedback		Level of agreement on measures taken					
		SA	A	DA	SDA	NR	Total
I simply accepted them as correct because they were prepared by instructors.	Count	33	60	54	26	2	175
	% within measures	18.9	34.2	30.9	14.9	1.1	100.0
	Combined	53.1		45.8		1.1	100.0
I referred to other books and got correction to them.	Count	39	101	30	4	1	175
	% within measures	22.3	57.7	17.1	2.3	0.6	100.0
	Combined	80.0		19.4		0.6	100.0
I contacted a professional in the subject I was studying and got mistakes corrected.	Count	25	93	48	7	2	175
	% within measures	14.3	53.2	27.4	4.0	1.1	100.0
	Combined	67.5		31.4		1.1	100.0
I contacted my tutor via an email/over the telephone and got the mistakes corrected.	Count	24	65	65	19	2	175
	% within measures	13.7	37.2	37.2	10.8	1.1	100.0
	Combined	50.9		48.0		1.1	100.0
I contacted my tutor when face-to-face sessions were held and got the mistakes corrected.	Count	43	59	59	13	1	175
	% within measures	24.6	33.7	33.7	7.4	0.6	100.0
	Combined	58.3		41.1		0.6	100.0
I could not do anything; rather I was demotivated to keep learning.	Count	11	38	84	40	2	175
	% within measures	6.3	21.7	48.0	22.9	1.1	100.0
	Combined	28.0		70.9		1.1	100.0

Note: - NR = No response

As it is depicted in Table 5.50, 80.0% of student respondents said that they referred to other books while 67.5% indicated that they contacted professionals for assistance with wrong answers in exercises and activity questions in their learning materials. Almost the same number of respondents agreed and disagreed on the type of measure they took, namely contacting their tutors via email or telephone to get corrections. A significant number of student respondents, (58.3%), replied that they resolved confusions during face-to-face sessions organised by the institutions, while 41.1% of them rejected this. This meant that the latter number of respondents might have missed the tutorial sessions. Some 70.9% of respondents indicated that they were able to keep studying without being demotivated by the incorrect feedback provided in their learning materials. In essence, the respondents reported that when they did not understand some content some content in the learning material, they referred to relevant books and contacted professionals via different outlets such as emails and telephone.

5.3.4.14 Student respondents' understanding of the provision, structure and benefits of working on assignments

Assignments, also commonly called tutor-marked assignments, are included in the SIM to help learners identify the most important parts of a course and promote learning by creating dialogue between the learner and the tutor. The tutor is expected to comment (often in detail) on the learner's answers (COL, 2005:197).

This section presents the students' responses on the provision, structure and benefits achieved from working on assignments for submission as depicted sequentially in Tables 5.51 to 5.54.

Table 5.51: Distribution of understanding of student respondents about the provision of assignments for submission

Responses		Working on assignments			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	163	93.1	93.1	93.1
	No	12	6.9	6.9	100.0
	Total	175	100.0	100.0	

As indicated in Table 5.51, 93.1% of student respondents students agreed that they were made to work on assignments and submitted them to their institutions for marking and to be added to their final grades.

Table 5.52: Distribution of student respondents' experience of working on the assignments for submission

Responses	I did the assignments after completing	
	Frequency	Percent
A course	32	18.3
A module	110	62.9
A unit	25	14.3
No response	8	4.6
Total	175	100.00

Regarding the experience of encountering assignments for submission, most respondents, 62.9%, as noted in Table 5.52, replied that they did the assignments after they completed their learning in each module. Responses with lower numbers could be that either the respondents considered it same as other exercises or activities included in the learning materials or they might be late entrants who were supported to cover the course in due time. Nonrespondents might be those who did not work on the assignments or those who misunderstood the purpose of this question.

Table 5.53 presents qualitative data from open-ended questions in quantitative form.

Table 5.53: Number of assignments that student respondents managed to work and submitted

Per	Number of assignments submitted by students				
	1	2	3	4	
	Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)	Total (%)
Unit	16 (9.1)	0 (0.0)	0 (0.0)	0 (0.0)	16 (9.1)
Module	47 (26.9)	25 (14.3)	0 (0.0)	6 (3.4)	78 (44.6)
Course	70 (40.0)	3 (1.7)	0 (0.0)	0 (0.0)	73 (41.7)
Total	133 (76.0)	28 (16.0)	0 (0.0)	6 (3.4)	167(95.4)
NR					8 (4.6)
Grand total					175 (100.0)

Note: RT = Response total; NR = No response

As the table shows, a large number of students (70 [40%]) indicated that they submitted one assignment per course, while a significant number of them (47 [26.9%]) replied that they were given one assignment per module. As indicated in Table 5.53, a very small number of students (8 [4.6%]) did not respond regarding their experience of working on assignments. These might be those whose cases for similar reasons as those provided for on Table 5.52.

Of the students who indicated that they managed to work on the assignments, 90.3% said they did all the required assignments and submitted to their respective institutions on time for marking and inclusion in their grades as indicated in Table 5.54 below.

Table 5.54: Students' reaction towards assignments for submission

Reaction towards assignments		Attempted all assignments & sent to tutor on time	
		Frequency	Percent
Value	Yes	158	90.3
	No	8	4.6
No response		9	5.1
Total		175	100.0

Table 5.55: Students' reaction towards their engagement on assignments for submission

Reaction on their engagement		Did you work all the assignments by yourself?			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	111	63.4	66.5	66.5
	Got some support	10	5.7	6.0	72.5
	Got support on all	45	25.7	26.9	99.4
	I did not do any	1	.6	.6	100.0
	Total	167	95.4	100.0	
No response		8	4.6		
Grand Total		175	100.0		

Concerning assignments that should be submitted, Table 5.55 displays that most student respondents (63.4%) worked on the assignments by themselves, and 25.7% others received support in doing the assignments. Eight respondents did not share their opinions on this question. Altogether, 55 respondents responded to the question that probed whether they sought assistance for some or all of the assignments.

A follow-up question asked them why they needed support to work on assignments. Their responses are tabulated in Table 5.56 below.

Table 5.56: Student respondents' reasons for seeking support in assignments

Reason for getting support from others		Responses	
		Frequency	Percent
Valid	Lack of time	20	36.4%
	Difficulty of course	7	12.7%
	Difficulty of questions	18	32.7%
	Vagueness of questions	10	18.2%
Total		55	100.0

The majority of respondents mentioned a lack of time (36.4%) and difficulty of questions (32.7%) as the main reasons. The vagueness of questions and the difficulty of the courses were ranked the third and fourth reasons respectively.

Furthermore, student respondents were also requested to assess the structure of the assignments and the benefits they obtained from working on them. Their responses are presented in Tables 5.57 and 5.58 below.

Table 5.57: Distribution of level of agreement of student respondents on the structure of assignments for submission

Structure maintained by the assignments		Students' knowledge of the structures					
		SA	A	DA	SDA	NR	Total
There were clear and precise instructions to each activity left in the assignments.	Count	74	63	15	3	20	175
	% within structure	42.3	36.0	8.6	1.7	11.4	100.0
	Combined	78.3		10.3		11.4	100.0
There was specified time to accomplish working on each activity of the assignment.	Count	1	62	56	36	20	175
	% within structure	0.6	35.4	32.0	20.6	11.4	100.0
	Combined	36.0		52.6		11.4	100.0
There were examples included to guide how to work on the assignments.	Count	15	25	90	25	20	175
	% within structure	8.6	14.3	51.4	14.3	11.4	100.0
	Combined	22.9		65.7		11.4	100.0

Table 5.57 shows the responses of 155 respondents and that 20 of them did not say express an opinion here. Altogether, 78.3% of the respondents agreed that the assignments had clear and

precise instructions for each activity included in the modules. Similarly, 52.6% replied that time was not specified to accomplish work on each activity of the assignment, while 65.7% indicated that examples were not provided on how to work on the assignments.

Table 5.58: Students' responses on the benefits of working on assignments

Response		Did you benefit from working on assignments?			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	154	88.0	92.2	92.2
	No	13	7.4	7.8	100.0
	Total	167	95.4		
No response		8	4.6		
Total		175	100.0		

Regarding the benefits that students obtained from working on the assignments, as Table 5.58 shows, the majority of respondents, 154 (88.0%), said that they benefited from working on assignments. Table 5.60 also indicates that 13 (7.4%) respondents did not benefit from working on assignments and some other respondents, 8 (4.6%) failed to respond to this set of questions.

Moreover, the respondents were invited to share their experiences on the type of benefits they derived from working on the assignments meant for submission. Their responses are presented in Table 5.59 below and they have been analysed using a χ^2 test to see the relationships between the types of benefits and the respondents' understandings described in agreements.

Table 5.59: Types of benefits obtained by student respondents for working on assignments

Types of benefits		Level of agreement					
		SA	A	DA	SDA	NR	Total
They helped me to identify the most important parts of a course.	Count	55	79	17	4	20	175
	% within benefits	31.4	45.1	9.8	2.3	11.4	100.0
	Combined	76.5		12.1		11.4	100.0
They enabled me to get detailed and personalised feedback from my tutor	Count	6	69	68	12	20	175
	% within benefits	3.4	39.4	38.9	6.9	11.4	100.0
	Combined	42.8		45.8		11.4	100.0
They helped me to effectively work on the overall assessment	Count	32	97	23	3	20	175
	% within benefits	18.3	55.4	13.2	1.7	11.4	100.0

Types of benefits		Level of agreement					
		SA	A	DA	SDA	NR	Total
	Combined	73.7		14.9		11.4	100.0
They helped me to pace my studying through the course	Count	29	97	27	2	20	175
	% within benefits	16.6	55.4	15.4	1.2	11.4	100.0
	Combined	72.0		16.6		11.4	100.0
They helped me to relate what I was learning to my own situation	Count	27	25	95	8	20	175
	% within benefits	15.4	14.3	54.3	4.6	11.4	100.0
	Combined	29.7		58.9		11.4	100.0
They helped me to see the standard of work that was expected on the course	Count	46	81	26	2	20	175
	% within benefits	26.3	46.3	14.8	1.2	11.4	100.0
	Combined	72.6		16.0		11.4	100.0
They provided me an opportunity to have a dialogue with my tutor	Count	20	49	75	11	20	175
	% within benefits	11.4	28.0	42.9	6.3	11.4	100.0
	Combined	39.4		49.2		11.4	100.0
Total	Count	221	567	261	36	140	1225
	% within benefits	18.1	46.3	21.3	2.9	11.4	100.0
	Combined	64.2		23.2		11.4	100.0

[X² = 168.1; df = 24; p <.001]

As indicated in Table 5.59, though 20 respondents did not reply to a set of questions in this section, the majority of respondents 134 (76.5%), agreed with the statement that assignments helped them to identify the key parts of a course. Similarly, the respondents agreed that working on the assignments helped them relatively with same degree to effectively attempt the questions designed to assess their learning, to pace their learning through the course and to analyse the standard of work they were expected to do on the whole courses. However, most of the respondents said that working on assignments did not enable them to get detailed and personalised feedback from their tutors, to relate what they learned to their own situations and to have dialogue with their tutors. Consistent with the research design of this study, student respondents were also asked to answer open-ended questions that required them to state if they had anything to say regarding the tutor-marked assignments. As Table 5.60 reflects, only 150 respondents provided their opinions here.

Table 5.60: Students' suggestions for preparing assignments for submission

Opinions of the students	Distribution of responses	
	Frequency	Percent
The questions in the assignments better be based on the course and prepare students for final exams.	10	6.7
Better if two tutor-marked assignments be provided per a course.	12	8.0
Better if one tutor-marked assignment be provided per a module.	20	13.3
Feedback to the assignments together with comments should be given without much delay to see progress of learning and to be ready for final exams.	64	42.7
More space should be provided on the assignment sheets to enable students to work hard.	8	5.3
The questions in the assignments better cover all the points discussed in the module/course.	15	10.0
Better assignments consist of exemplary questions together with comprehensive feedback.	10	6.7
Assignments should carry some percentage of the whole course value.	11	7.3
Total	150	100.0

Of the 150 student respondents, 64 (42.7%) expressed their opinions about the timely feedback on their assignments with comments that enabled them to check their learning progress and prepare for the final examinations.

5.3.4.15 Student respondents' understanding of the availability, appropriateness and uses of icons in the learning materials

Many ODL texts and websites use icons/signs to indicate the nature of a piece of text or a task that is used to guide learners through a complex piece of learning material (COL, 2005:139). Their instructional purpose is mostly to show the structure of a part of the lesson. Understanding that icons play an important role in SIM, the researcher sought to know the services that the students received from the icons and probed them as to how their services could be maximised. Table 5.61 and Table 5.62 present the responses of the participants respectively.

Table 5.61: Student respondents' understanding of the services of icons

Nature and services of icons		Students' responses			Total
		Yes	No	NR	
Icons conveyed the intended message	Count	106	39	30	175
	% within services	60.6	22.3	17.1	100.0
Icons provided guidance	Count	115	32	28	175
	% within services	65.7	18.3	16.0	100.0
Icons represented access devices	Count	128	44	3	175
	% within services	73.1	25.1	1.7	100.0
Icons were uniform throughout	Count	109	38	28	175
	% within services	62.3	21.7	16.0	100.0
Total	Count	458	153	89	700
	% within services	65.4	21.9	12.7	100.0

[$\chi^2 = 26.7$; $df = 6$; $p < .001$]

As depicted in Table 5.61, most student respondents said they understood that icons, as forms of access devices, helped them to convey the intended information about the learning materials, and guided them in their learning. Altogether, 62.3% of respondents felt that the icons were uniform throughout the course, while 21.7% of them did not respond to this set of questions.

In an open-ended question, the respondents were asked if they had anything to say regarding the icons used in the course materials, and Table 5.62 summarises their comments.

Table 5.62: Students' views on how to maximise the services of icons used in learning materials

Opinions of respondents towards icons used	Distribution of responses	
	Frequency	Percent
Most of them were not relevant in the course materials.	8	7.0
They were properly placed and enriched understanding of content.	10	8.7
It would be better if they were used in each context of each reading to focus the attention of the learner.	10	8.7
They should say something what they represent.	29	25.2
They were not easily recognisable in the materials.	29	25.2
Definition of the icons should be given prior to using them in the materials.	29	25.2
Total	115	100.0

As indicated in Table 5.62, only 115 respondents responded to this open-ended question, and 29 (25.2%) of them said the icons should communicate to the learner, the meaning attached to what they represented in the learning materials. The same number of students said that the icons were not easily understandable and defining icons should have been made in advance of integrating them into the learning materials. There were also same number of students, 10 (8.7%), who responded that the icons were placed properly and enriched their understanding of the content, and that it would be better if the icons were used to each context of the reading to focus the attention of the learner. A very small number of students 8 (7.0%) responded that most of the icons were not relevant in the course materials.

5.3.4.16 Students' understanding of the availability, nature, and benefits of working on self-checklist or post-tests in their learning materials

As one of the basic access devices available in SIM, a self-checklist or a post-test is considered a good method for helping OD learners to determine if they have understood everything in a unit of learning. If they answer any of the questions incorrectly, they can be advised to refer back to the relevant part of the unit to have another attempt at learning that part (COL, 2005:148). Post-tests are also called 'after devices' and are meant to help learners round off their study of the unit. In this sense, the researcher posed some questions designed to probe the respondents' understanding of the learning materials, their nature and the benefits obtained from them as presented in Table 5.63 to Table 5.65.

Table 5.63 Students' understanding of the availability of self-checklists

Responses		Self-checklist/post-tests were included in the SIM			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	43	24.6	24.6	24.6
	No	132	75.4	75.4	100.0
	Total	175	100.0	100.0	

As shown in Table 5.63, 75.4% of the participants stated that their learning materials did not consist of post-tests which are believed to be good for helping learners to find out if they have understood the content in a unit of learning. Some 24.6% of those who said their learning materials did consist of post-tests were from Renaissance Global College of Open and Virtual Learning (RGCOWL) while a document analysis was carried out using the rubric chosen for this study.

Table 5.64: Students' understanding of the nature of self-checklists/post-tests

Nature of self-checklists/post-tests		Students' understanding of the nature of self-checklists				
		SA	A	DA	SDA	Total
Most of them were directly related to the objectives of a unit of learning	Count	10	20	5	5	40
	% within nature	25.0	50.0	12.5	12.5	100.0
	Combined	75.0		25.0		100
Checklists were expected to be completed within a given time.	Count	5	7	15	13	40
	% within nature	12.5	17.5	37.5	32.5	100.0
	Combined	30.0		70.0		100
Total	Count	15	27	20	18	80
	% within nature	18.7	33.8	25.0	22.5	100.0
	Combined	52.5		47.5		100

[$\chi^2 = 16.5$; $df = 3$; $p < .001$]

Student respondents were also requested to share their experiences with the post-tests in relation to the services they received from them. Altogether, 40 out of 43 respondents who indicated that their learning materials consisted of self-checklists, confirmed that they had attempted them prior to working on the SCE and LA, which was the purpose that they are supposed to serve. Table 5.64 indicates that a large percentage of student respondents (75%) who used the post-tests agreed that most of them were directly related to the objectives of a unit of study. However, a significant percentage of them (70%) disagreed that a specific time was provided to keep them busy with the self-checklists. Though ODL advocates an unrestricted pace of learning, the attitudes of the community and the institutions educating them are still bound by scholars who think that DE is inferior to conventional classes. They recommend that distance learners should be given a restricted timeframe to successfully perform and complete their learning.

This study sought to get participants' responses on the benefits that they obtained from working on the post-tests. Their responses are displayed in Table 5.65.

Table 5.65: Distribution of level of agreement of student respondents about the benefits of working on self-checklists/post-tests

Uses of post-tests		Distribution of level of agreements				
		SA	A	DA	SDA	Total
They enabled me to score best results both in the assignments & final examination	Count	19	13	4	4	40
	% within use	47.5	32.5	10.0	10.0	100.0
	Combined	80.0		20.0		100.0
They encouraged me to develop open communication with myself	Count	17	13	4	6	40
	% within use	42.5	32.5	10.0	15.0	100.0
	Combined	75.0		25.0		100.0
They gave me constant advice to refer back and read thoroughly what I seemed to be unconfident with.	Count	14	16	5	5	40
	% within use	35.0	40.0	12.5	12.5	100.0
	Combined	75.0		25.0		100.0
They helped me to find out what I missed in the unit of learning.	Count	17	15	5	3	40
	% within use	42.5	37.5	12.5	7.5	100.0
	Combined	80.0		20.0		100.0
They informed me what type of media are associated to a specific unit of learning	Count	4	5	20	11	40
	% within use	10.0	12.5	50.0	27.5	100.0
	Combined	22.5		77.5		100.0
They made me alert about the forthcoming activity	Count	15	18	5	2	40
	% within use	37.5	45.0	12.5	5.0	100.0
	Combined	82.5		17.5		100.0
They made me to become responsible to my own learning	Count	14	16	5	5	40
	% within use	35.0	40.0	12.5	12.5	100.0
	Combined	75.0		25.0		100.0
They motivated me to keep checking the progress of my learning	Count	16	15	5	4	40
	% within use	40.0	37.5	12.5	10.0	100.0
	Combined	77.5		22.5		100.0
They served me to have a dialogue virtually with my instructors	Count	8	7	18	7	40
	% within use	20.0	17.5	45.0	17.5	100.0
	Combined	37.5		62.5		100.0
Total	Count	124	118	71	47	360
	% within use	34.4	32.8	19.7	13.1	100.0
	Combined	67.2		32.8		100.0

[$\chi^2 = 76.2$; $df = 24$; $p < .001$]

Table 5.65 shows in average that a large percentage of respondents (67.2%) who used self-checklists agreed that they had all the proposed benefits listed in the table while significant number of them (32.8%) of them referred that they did not find the self-checklists useful. To be very specific, large percentages of respondents, 31 (77.5%) and 25 (62.5%), replied that the two proposed benefits, informing learners about the type of media associated with a specific unit of learning and helping them to have a dialogue virtually with their instructors were not served by the post-tests.

In general, students who worked on self-checklists seemed to benefit from them. Therefore, institutions should encourage the inclusion of post-tests in ODL materials if their distance learners are to become successful and their learning materials get closer to being SIM.

5.3.4.17 Students' understanding of the allotment and appropriateness of study time for a course in their learning materials

Many instructional designers believe that over-loading Open Distance Learning (ODL) materials hampers the quality expected of them and demotivates ODL learners to successfully complete their study. According to these experts, a well-trained ODL instructor should decide the speed at which they think the target audience can complete various tasks (COL, 2005:152). The speed depends on factors such as age, educational level, and experience of self-study, and the figures used depend heavily on the target audience (COL, 2005:152). As Lockwood (2017:142) argued, study time should equate to the workload associated with a particular course of study.

This section discusses how student respondents understood the study time allotted for various tasks in their learning materials based on their responses presented from Table 5.66 to Table 5.68.

Table 5.66: Students' understanding of the allotment of study time for courses

Responses		Study time was allotted to study the course			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	55	31.4	31.4	31.4
	No	120	68.6	68.6	100.0
	Total	175	100.0	100.0	

As shown in Table 5.66, 68.6% of respondents stated that their learning materials did not stipulate how long they should spend learning the modules. However, a significant number of them (31.4%) differed, saying they did stipulate the time they should spend learning. While analysing the qualitative data using a document analysis approach, the researcher found that modules of only one of the private institutions, RGCOVL, allotted study time for courses. Presumably, all the students of this institution gave the 'yes' response and 15 of other institutions might have responded without understanding the question.

Table 5.67: Students' understanding of the appropriateness of study time allotted for courses

Responses		Students' understanding of the appropriateness of study time allotted for courses			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Adequate	44	25.1	26.3	26.3
	Fair	102	58.3	61.1	87.4
	Inadequate	15	8.6	9.0	96.4
	Excess for some	5	2.9	3.0	99.4
	Do not know	1	0.6	0.6	100.0
	Total	167	95.4	100.0	
No response		8	4.6		
Total		175	100.0		

As displayed in Table 5.67, 58.3% of respondents felt that the time provided to cover their learning materials was fair and 25.1% of them said that it was adequate for the courses. Though small, 8.6% of participants commented that the study time was not adequate. The respondents' opinions on the appropriateness of study time were associated with the length of time they were given from the start of the course until they completed it before taking final examinations. The student respondents were also asked whether they were given a fixed time for different types of tasks incorporated into their learning materials.

Table 5.68: Students' understanding of the provision of study time for different tasks incorporated into their learning materials

Responses		Time was allotted for every task in the module			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	50	28.6	28.6	28.6
	No	125	71.4	71.4	100.0
	Total	175	100.0	100.0	

Table 5.68 indicates that a large number of them (71.4%) stated that they were not directed as to how much time they should budget for each activity in their learning materials.

5.3.4.18 Students' understanding of the availability, nature and benefits of glossaries in their learning materials

As a useful addition to an ODL course, glossaries provide a quick reference for learners to check words that they do not understand. Based on the positive comments I received from distance learners I had previously taught, I asked student respondents to share their experiences as to whether they came across glossaries in their learning materials, and their purposes as presented in Table 5.69.

Table 5.69: Students' understanding of the availability of glossaries in their SIM

Responses		Distribution of responses on their understanding			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	5.7	5.7	5.7
	No	165	94.3	94.3	100.0
Total		175	100.0	100.0	

As reflected in Table 5.69, nearly all the respondents, 94.3%, said their learning materials did not have glossaries. Their responses were in line with the data obtained through document analysis. The latter revealed that no learning material contained glossaries even though studies show that students who use English as a second language should be supported with all mechanisms that can maximise their learning. Glossaries in self-contained learning materials help learners to get immediate descriptions of selected terminologies included in the reading texts.

This study probed respondents' on whether it was necessary to get built-in glossaries in their learning materials. This open-ended question was answered by 120 respondents (out of 175) and their responses are presented in Table 5.70.

Table 5.70: Students' views about the inclusion of glossaries in the ODL materials

Statements	Distribution of responses	
	Frequency	Percent
Glossaries are very important for the learner to know new words, to get meanings or translations of vague words.	33	27.5
Better glossaries are included in the modules to underpin understanding of each lesson of a course.	13	10.8
A module with a glossary solves some problems of a learner in avoiding confusions.	9	7.5
A glossary supports the student in providing definitions of key words which convey the central thought of the lesson.	65	54.2
Total	120	100.0

A glossary provides support to OD learners by giving definitions of keywords, conveying the central thought of the lesson, explaining the meanings of new words or vague words, and clarifying the understanding of each lesson of a course got first to third rating respectively. These can be addressed if appropriate SIM are prepared together with other comments suggested so far.

5.3.4.19 Students' understanding of the availability and benefits of signposts in their learning materials

As the mechanics of SIM include a 'during stage', that is, while the content is being studied, there should be access devices built into the learning materials of ODL. Verbal signposts are words meant to serve this purpose. It is assumed that they help learners to follow the text. Examples of verbal signposts include 'as you saw in the previous unit'; 'in the next example you will see this difference more clearly'; 'that activity should have helped you to identify the main reasons for ...'; and 'in the next unit we will explore some solutions to this problem' (COL, 2005:143). The respondents were requested to provide their responses depicted in Table 5.71 to Table 5.73 to questions set under this category.

Table 5.71: Students' understanding of the availability of verbal signposts

Responses		Distribution of responses on the availability of signposts			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	135	77.1	77.1	77.1
	No	40	22.9	22.9	100.0
Total		175	100.0	100.0	

As Table 5.71 shows, 77.1% of the respondents confirmed that their learning materials included verbal signposts while 22.9% of them said their modules did not include this access device. The document review showed that almost all the modules of the institutions did not incorporate verbal signs, possibly because the CW had not had exposure to them.

The respondents who believed that their materials consisted of verbal signs were also asked how frequently they occurred.

Table 5.72: Students' responses on the presence of verbal signposts in their learning materials

Responses		Verbal signposts in their learning materials occurred			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very frequently	46	26.3	33.8	33.8
	Very rarely	41	23.4	30.1	64.0
	Often	16	9.1	11.8	75.7
	Sometimes	33	18.9	24.3	100.0
	Total	136	77.7	100.0	
No response		39	22.3		
Total		175	100.0		

As shown in Table 5.72, 26.3% of the respondents reported that the verbal signposts appeared in their learning materials very frequently, which is slightly bigger than those who said they featured very rarely, 23.4%. Another group of respondents responded that the verbal signposts' appearance appeared 'sometimes' in the learning materials. Careful investigation of the analysis of the responses captured in Table 5.71 and Table 5.72 show that a total 42.3% of those who responded, 'very rarely' and 'sometimes' understood that the verbal signposts did not appear regularly. Similarly, 35.4% of those who said, 'very frequently' and 'often' declared that the verbal signposts occurred regularly.

The analysis in this section shows that most respondents believed that their learning materials consisted of verbal signposts. The analysis made using a rubric carrying a set of checklists shows that there were no modular materials with built-in access devices.

The respondents were also asked about the benefits that they obtained from the verbal signposts. In response, 134 respondents indicated the benefits that they gained, and their reflections are presented in Table 5.73

Table 5.73: Distribution of level of agreement of respondents about the expected benefits of verbal signposts

Expected benefits of verbal signposts		Students' reaction towards verbal signposts					
		SA	A	DA	SDA	NR	Total
They enabled me to understand the correlation created between consecutive lessons	Count	52	58	21	3	41	175
	% within benefits	29.7	33.2	12.0	1.7	23.4	100.0
	Combined	62.9		13.7		23.4	100.0
They encouraged me to have a clear understanding of each unit of learning.	Count	64	58	10	2	41	175
	% within benefits	36.6	33.2	5.7	1.1	23.4	100.0
	Combined	69.8		6.8		23.4	100.0
They made me alert about the forthcoming discussion or reading text.	Count	56	57	18	3	41	175
	% within benefits	32.0	32.6	10.3	1.7	23.4	100.0
	Combined	64.6		12.0		23.4	100.0
They showed me the gap created because of misunderstanding of the lesson.	Count	47	63	21	3	41	175
	% within benefits	26.9	36.0	12.0	1.7	23.4	100.0
	Combined	62.9		13.7		23.4	100.0
They alerted me to stick to the allotted study time	Count	5	50	47	32	41	175
	% within benefits	2.8	28.6	26.8	18.3	23.4	100.0
	Combined	31.5		45.1		23.4	100.0
They reminded me of the type of obligation I should perform.	Count	38	71	23	2	41	175
	% within benefits	21.7	40.6	13.2	1.1	23.4	100.0
	Combined	62.3		14.3		23.4	175
Total	Count	286	377	120	21	246	1 050
	% within benefits	27.2	36.0	11.4	2.0	23.4	100.0
	Combined	63.2		13.4		23.4	100.0

NR = No response; [$\chi^2 = 35.38$; $df = 20$; $p = 0.018 (< 0.05)$]

As indicated in Table 5.73, most of them (69.8%) agreed that verbal signposts encouraged them to understand each unit of learning clearly. Similarly, most respondents agreed that the verbal signposts alerted them about the forthcoming lessons, how they might misunderstand each lesson and enabled them to understand the correlation between consecutive lessons. The obligations that remind the OD learners to perform tasks in their learning materials were also noted by 62.3% of the respondents. Moreover, a significant proportion of the respondents (45.1%) stated that the signposts awakened them to stick to the allotted study time. In total, it seemed that most respondents benefited from the signposts incorporated into their learning modules.

5.3.4.20 Student respondents' understanding of the nature of typography and layout of learning materials

Typography and layout in texts and on the web are very important structures of ODL materials. Generally, ODL texts are characterised by the use of a good-sized page (usually A4) to create a spacious layout; space that is left for learners to make their own notes on the pages; spaces that are provided for learners to write down their answers to activities; and the use of different type fonts (and/or different sizes) to indicate the nature of a piece of text (e.g., using a different font for activities) (COL, 2005:141). According to Cambridge Advanced Learners' Dictionary (2007), typography is the style, size and arrangement of letters in a piece of printing material, while layout refers to the way that something is arranged. Based on this understanding, the researcher requested student respondents to state how these two structures were addressed in their learning materials.

Table 5.74: Distribution of students' responses on the typography & layout of their learning materials (N = Number)

Possible responses	Distribution of students' responses on typography & layout of learning materials					
	Yes		No		Total	
	N	%	N	%	N	(%)
The learning materials were made with a good-sized page of paper having a spacious layout.	44	25.1	131	74.9	175	100.0
The learning materials consisted of spaces left for me to make my own notes on the pages.	68	38.9	107	61.1	175	100.0
The learning materials consisted of spaces left for me to write down my answers to activities.	53	30.3	122	69.7	175	100.0

Possible responses	Distribution of students' responses on typography & layout of learning materials					
	Yes		No		Total	
	N	%	N	%	N	(%)
The learning materials kept a reasonable space below each heading or title.	94	53.7	81	46.3	175	100.0
The learning materials used different types and sized fonts to indicate course name, module name, topics, units, sub-units, etc.	76	43.4	99	56.6	175	100.0
The learning materials consisted of topics titles and numbers across the top of the pages till the last part of each topic.	73	41.7	102	58.3	175	100.0
The learning materials used boxes, pointing fingers, rules, etc. to give emphasis to very important points.	75	42.9	100	57.1	175	100.0
A page of the learning materials was not cluttered with many access devices that were included to direct me to study.	101	57.7	74	42.3	175	100.0
Consecutive textual paragraphs were moderately spaced in the learning materials.	85	48.6	90	51.4	175	100.0
Each reading text of the learning materials were prepared with restricted line length which made it the reading much easier.	80	45.7	95	54.3	175	100.0

As indicated in Table 5.74, a large number of respondents (74.9%) reported that their learning materials were not provided with good-sized pages and lacked a spacious layout. As such, the learning materials had insufficient spaces for learners to write down their answers to activity questions and to make their own abridged notes from the content they read, as indicated by 69.7% and 61.1% respectively. Similarly, except for two statements for which the majority of respondents gave positive answers, 53.7% referred to the availability of reasonable spaces below each heading or title and 57.7% agreed that a page of a given module was not cluttered by access devices), the majority of respondents stated that the typography and layout of learning materials did not make reading easy.

5.3.4.21 Student respondents' understanding of the house style used in learning materials

ODL materials are assumed to be SIM and comprise distinctive features that can maximise independent learning. All the structures that define access devices together with the chosen and

adopted layout and design that should be consistent throughout the learning material create the house or in-house style for a specific ODL institution (Lockwood, 2017:135). An in-house style underpins what the learner should do through repetitive exposure to each task included in the learning material. In this regard, student respondents were requested to state whether their learning materials had unique features that could differentiate them from others and whether they attained benefits from them. The students' responses are presented in Table 5.75.

Table 5.75: Distribution of level of agreement among respondents on the inhouse style used in learning materials

Proposed quality of an inhouse style		Distribution of level of agreement with the propositions				
		SA	A	DA	SDA	Total
The learning materials were prepared having similar layout and design.	Count	69	77	28	1	175
	% within quality	39.4	44.0	16.0	0.6	100.0
	Combined	83.4		16.6		100.0
I could easily differentiate the learning materials of my university from the other by referring to its layout and design.	Count	50	77	39	9	175
	% within quality	28.6	44.0	22.3	5.1	100.0
	Combined	72.6		27.4		100.0
The way the learning materials were made was stimulating to keep learning.	Count	15	69	86	5	175
	% within quality	8.6	39.4	49.1	2.9	100.0
	Combined	48.0		52.0		
The learning materials simply seemed to give a negative "take it or leave" impression.	Count	9	74	72	20	175
	% within quality	5.2	42.3	41.1	11.4	100.0
	Combined	47.5		52.5		100.0
The learning material seemed to say 'Use me [and don't leave me].	Count	8	54	106	7	175
	% within quality	4.6	30.9	60.5	4.0	100.0
	Combined	35.5		64.5		100.0
The study materials were prepared with the notion of user-friendly.	Count	5	58	103	9	175
	% within quality	2.9	33.1	58.9	5.1	100.0
	Combined	36.0		64.0		100.0
I can easily carry the learning materials wherever I go (they are portable).	Count	27	104	33	11	175
	% within quality	15.4	59.4	18.9	6.3	100.0
	Combined	74.8		25.2		100.0
The colour, the margin, layout used in the learning materials encourage my learning.	Count	8	43	112	12	175
	% within quality	4.6	24.6	64.0	6.8	100.0
	Combined	29.2		70.8		100.0

Table 5.75 indicates that 83.4% of students stated that their learning materials were prepared with similar layout and design, which enabled most of them (72.6%), to easily differentiate their learning materials from others. A larger majority (74.8%) agreed that their learning materials were portable.

Regarding the colour, the margin, and layout used in their learning materials, 70.8% of student respondents complained that they did not encourage them to learn. Similarly, the way the learning materials were prepared seemed to portray 'Do not use me [and leave me]', according to 64.6% of the respondents, which supports the response of 64.0% of the students who disagreed with the statement that their learning materials were prepared to be user-friendly. In general, a large number of student respondents said their learning materials did not stimulate them to keep reading.

5.3.5 Information on Knowledge of Course Writers and Coordinators About ODL

5.3.5.1 Knowledge of course writers and coordinators about ODL

It is important that an institution should have CW with appropriate expertise in designing instructions for ODL to ensure that the system works effectively. However, in Ethiopia, the challenge is that the institutions running ODL recruit conventional school instructors to prepare ODL materials and conduct short workshops for them that highlight what the materials should look like. Experts in the field of ODL strongly assert that those who design instruction for post-school courses need to focus on the approaches that foster the inclusion of opportunities for learners to recall their prior knowledge and experience. Moreover, they should enable learners to question why they are learning; encourage learners to make choices and direct their own learning; encourage learners to set their own personal goals and to check their progress of learning against them; support learners to choose their own ways to complete tasks; and give learners the maximum opportunity to put new knowledge and skills into practice (COL, 2005:10). Simonson, Smaldino and Zvacek (2015:130) argued that while instructions are developed for ODL, the teaching style of the instructors, the course goals and content should be aligned with the unique characteristics and needs of students. They further stressed that interaction of ODL students with their course materials, instructors and fellow colleagues should be maximised, the visual potential of the medium must be explored, and time constraints must be addressed.

Authors who prepare ODL materials should write in a way that is engaging and actively involves the learners. They need to be convinced that their materials should read more like a tutorial than

a lecture, with an emphasis on interaction (COL, 2000:2). Against this background, the researcher intended to evaluate the perspectives of course writers and coordinators on ODL. Hence, the questions were forwarded to the latter to assess their knowledge and experiences in ODL as presented in Table 5.76 and Table 5.77.

Table 5.76: Knowledge of course writers and coordinators about ODL

Responses		Knowledge of course writers and coordinators about ODL							
		Frequency		Percent		Valid Percent		Cumulative Percent	
		CW	CC	CW	CC	CW	CC	CW	CC
Valid	Yes	14	4	94.7	100.0	94.7	100.0	94.7	100.0
	Only a little	1	0	5.3	0.0	5.3	0.0	100.0	100.0
Total		15	4	100.0	100.0	100.0	100.0		

As indicated in Table 5.76, 94.7% (14 of the CW and four of the CC) agreed that they had knowledge about distance and open learning.

Table 5.77: Distribution of level of agreement of course writers & coordinators regarding their experience in ODL

Experiences of respondents		Distribution of level of agreement among CW/CC						
		Gov/Priv	Gov/Priv	Gov/Priv	Gov/Priv	Gov/Priv	Gov/Priv	
		SA	A	DA	SDA	UNC	Total (%)	
I have a degree in ODL.	CW	0/0	1/0	0/0	7/6	1/0	9	6
	Count/ % within experience	0.0/0.0	11.1/0.0	0.0/0.0	77.8/100.0	11.1/0.0	100.0	100.0
	CC	0/0	0/0	0/0	2/2	0/0	2	2
	Count/ % within experience	0.0/0.0	0.0/0.0	0.0/0.0	100.0/100.0	0.0/0.0	100.0	100.0
I attended training given by the institution for which I wrote courses, coordinate the programme.	Combined: CW	11.1/0.0		77.8/100.0		11.1/0.0	100.0	100.0
	CC	0.0/0.0		100.0/100.0		11.1/0.0	100.0	100.0
	CW	3/2	3/2	0/0	2/2	1/0	9	6
	Count/ % within experience	33.3/33.3	33.3/33.3	0.0/0.0	22.2/33.3	11.1/0.0	100.0	100.0
I attended training given by the institution for which I wrote courses, coordinate the programme.	CC	0/0	2/2	0/0	0/0	0/0	2	2
	Count/ % within experience	0.0/0.0	100.0/100.0	0.0/0.0	0.0/0.0	0.0/0.0	100.0	100.0
	Combined: CW	66.6/66.6		22.2/33.3		11.1/0.0	100.0	100.0
	CC	100.0/100.0		0.0/0.0		0.0/0.0	100.0	100.0

Experiences of respondents		Distribution of level of agreement among CW/CC								
		Gov/Priv	Gov/Priv	Gov/Priv	Gov/Priv	Gov/Priv	Gov/Priv			
		SA	A	DA	SDA	UNC	Total (%)			
I read for the purpose of course development & coordination.	CW Count/% within experience	2/2 22.2/33.3	4/2 44.4/33.3	0/0 0.0/0.0	3/1 33.3/16.7	0/1 0.0/16.7	9	6	100.0	100.0
	CC Count/% within experience	0/0 0.0/0.0	2/2 100.0/100.0	0/0 0.0/0.0	0/0 0.0/0.0	0/0 0.0/0.0	2	2	100.0	100.0
	Combined: CW	66.6/66.6		33.3/16.7		0.0/16.7	100.0	100.0	100.0	100.0
	CC	100.0/100.0		0.0/0.0		100.0/100.0	100.0	100.0	100.0	100.0
I attended conferences provided by the institution for which I wrote courses, coordinate the programme.	CW Count/% within experience	1/1 11.1/16.7	5/0 55.6/0.0	1/2 11.1/33.3	2/1 22.2/16.7	0/2 0.0/33.3	9	6	100.0	100.0
	CC Count/ % within experience	0/0 0.0/0.0	2/2 100.0/100.0	0/0 0.0/0.0	0/0 0.0/0.0	0/0 0.0/0.0	2	2	100.0	100.0
	Combined: CW	66.7/16.7		33.3/50.0		0.0/33.3	100.0	100.0	100.0	100.0
	CC	100.0/100.0		0.0/0.0		0.0/0.0	100.0	100.0	100.0	100.0
I came to know about it through my exposure while learning through ODL system.	CW Count/% within experience	0/0 0.0/0.0	1/1 11.1/16.7	2/1 22.2/16.7	5/3 55.6/50.0	1/1 11.1/16.7	9	6	100.0	100.0
	CC Count/ % within experience	0/0 0.0/0.0	0/0 0.0/0.0	0/0 0.0/0.0	2/2 100.0/100.0	0/0 0.0/0.0	2	2	100.0	100.0
	Combined: CW	11.1/16.7		77.8/66.7		11.1/16.7	100.0	100.0	100.0	100.0
	CC	0.0/0.0		100.0/100.0		0.0/0.0	100.0	100.0	100.0	100.0
I came to know about it from the name itself.	CW Count/ % within experience	0/0 0.0/0.0	1/1 11.1/16.7	2/1 22.2/16.7	6/3 66.7/50.0	0/2 0.0/33.3	9	6	100.0	100.0
	CC Count/ % within experience	0/0 0.0/0.0	0/0 0.0/0.0	0/0 0.0/0.0	2/2 100.0/100.0	0/0 0.0/0.0	2	2	100.0	100.0
	Combined: CW	11.1/16.7		88.9/66.7		0.0/33.3	100.0	100.0	100.0	100.0
	CC	0.0/0.0		100.0/100.0		0.0/0.0	100.0	100.0	100.0	100.0

Note: Gov. = Government, Priv.= Private

Table 5.77 depicts that none of the CW and CC had a degree in ODL. Many CW from the government institutions (6 [66.6%]) and private institutions (4 [66.6%]) indicated that they had attended training offered by the institutions in preparation for writing courses. Similarly, all CC attended the training sessions offered by their respective institutions. The same number of respondents (66.6%) said they were given exposure to reading for the purpose of course development and coordination, and attending conferences organised by the institution for the courses or programmes that they coordinated. From Table 5.77, it is evident that almost all the instructors and coordinators received training on the preparation of modular materials.

Table 5.78: Distribution of responses of course writers (CW) about the training they acquired to write ODL materials

Statements	Distribution of responses of CW (Fr,%)									
	MA		A		IA		DIA		Total (%)	
	Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv	Gov	Priv
Adequacy of training acquired	1	0	6	5	2	1	0	0	9	6
	11.1	0.0	66.7	83.3	22.2	16.7	0.0	0.0	100.0	100.0
Ability of trainers who gave the training	1	0	4	4	4	2	0	0	9	6
	11.1	0.0	44.4	66.7	44.4	33.3	0.0	0.0	100.0	100.0

Key: MA = More than adequate, A = Adequate, IA = Inadequate, DIA = Disappointingly inadequate

As Table 5.78 shows, the CW of both institutions regarded the training they attained to be adequate. However, those from the private institutions seemed to get better training than those in government institutions (83.3% > 66.7%). Regarding the capability of trainers, four out of six private CW (66.7%) said they had adequate skills and knowledge to provide the required training. Four CW from the government institutions responded that their trainers had adequate competencies while the same number said their competencies were inadequate.

5.3.5.2 Course writers and coordinators' understanding of why people choose to learn through DE

CW were also asked to respond to an open-ended question that requested them to share their opinions as to why people chose the system of distance and open education to further their careers. Table 5.79 summarises the reflections of CW and coordinators from private and government institutions together.

Table 5.79: Course writers and course coordinators' responses on why people choose to learn via distance education

Opinions forwarded	Distribution of responses	
	Numbers	Percent (%)
It is a modern education system enabling people to learn far away from the institutions.	3	15.8
It is a democratic education system.	1	5.3
It enables one to use their time effectively as compared to face-to-face modality.	4	21.0
It gives space and enough time for learners to handle their work and social commitments while attending their learning.	9	47.3
It enables learners to have their own suitable schedules.	1	5.3
It does not cost much money and energy.	1	5.3
Total	19	100.0

As Table 5.79 shows, nine out of 19 (47.3%) respondents suggested that the system of distance and open education gives space and enough time for learners to carry out their responsibilities and take care of their jobs while learning. Some of the responses such as 'ODL enable learners to use their time effectively' and 'It enables learners to learn wherever they are' received second and third ratings.

5.3.5.3 Course writers and coordinators' understanding of the advantages and disadvantages of learning via ODL

This study also sought to assess the CW and CC knowledge of the advantages and disadvantages of learning via the ODL system. In this regard, the CW and CC were asked open-ended questions to share their experiences. The responses were first organised based on their relevancy, then coded for categorising purpose and transcribed into figures for computation as presented in Table 5.80.

Table 5.80: Course writers and coordinators' understanding of the advantages of ODL

Opinions for advantages of learning via ODL	Distribution of responses per institution		
	Private	Government	
	N (%)	N (%)	Total
It enables learning being on job and to save money and studying whenever and wherever the learner is	4 (50.0)	2 (18.2)	6 (31.6)
Does not influence common lifestyle, good for high potential learners to use their time effectively	1 (12.5)	0 (0.0)	1 (5.3)
It facilitates for having better and guided modules that are like working manuals	0 (0.0)	1 (9.1)	1 (5.3)
Easy to get extra time for other activities, budget minimising (transport, copying, cost etc.)	0 (0.0)	1 (9.1)	1 (5.3)
Flexible as it is, it gives space & enough time for working and learners can go with suitable schedules	1 (12.5)	2 (18.2)	3 (15.8)
Convenient to enable self-learning.	1 (12.5)	4 (36.4)	5 (26.3)
It avoids distance barriers, encourages to use technologies and helps to manage time in avoiding space requirements	1 (12.5)	1 (9.1)	2 (10.5)
Total	8 (100.0)	11 (100.00)	19 (100.0)

As reflected in Table 5.80, 50.0% of the CW and CC from the private institutions stated that ODL enables learning while working, saves money, allows learners to study whenever and wherever they are, and 36.4% of government respondents reflected that it is convenient for self-learning.

Concerning the disadvantages of learning via the ODL system, as shown in Table 5.81, most respondents said that it is not good for struggling learners because of the lecturing method used and the need for frequent support. This compromised the quality of education, partly due to a lack of quality control mechanisms.

Table 5.81: Course writers and coordinators' understanding of the disadvantages of ODL

Statements	Number of responses per Institution		
	Private, N (%)	Govern, N (%)	Total
Most of the task should be taken by self, evaluation of learning is not based on continuous assessment.	1 (12.5)	0 (0.00)	1 (5.3)
If course materials are not made illustrative, they will lack clarity, learning may go wrong.	1 (12.5)	0 (0.0)	1 (5.3)
It may be difficult to get instructors on the required time.	1 (12.5)	0 (0.0)	1 (5.3)
High chance of destruction, complicated technology, loss of networking.	1 (12.5)	0 (0.0)	1 (5.3)
Not quite good for low potential learners due to the need for lecturing and frequent support and hence they might not be successful.	2 (25.0)	3 (27.3)	3 (26.3)
It compromises with quality of education as it lacks quality control mechanism which is the major concern of education.	2 (25.0)	3 (27.3)	3 (26.3)
It gives a better time, but it lacks strict time schedule.	0 (0.0)	1 (9.1)	1 (5.3)
Not sure on learners' ability, few percentages of face-to-face assessment.	0 (0.0)	1 (9.1)	1 (5.3)
Learners might not get timely and proper support in terms of input as well as feedback.	0 (0.0)	1 (9.1)	1 (5.3)
Missing face-to-face discussion, do not have the chance to read more than the modules.	0 (0.0)	1 (9.1)	1 (5.3)
Require strong structure and modern technologies, and students to be responsible for their learning.	0 (0.0)	1 (9.1)	1 (5.3)
Total	8 (100.0)	11 (100.0)	19 (100.0)

CW and CC were also asked about the level of learning they had achieved by learning through DE. Only 15 of the 19 respondents gave their responses. Out of these, eight were from the government universities and seven from the private ones. All respondents said that ODL was used up to the PhD level, which was delivered via online learning supported by face-to-face sessions. All of them stated that, Unisa had been teaching university lecturers and government officials through the system of ODL. The attitude of CW and CC towards the system of ODL had both positive and negative effects on their distance learners.

Through an open-ended question, the respondents were asked to indicate the mode of learning they preferred for upgrading their academic qualifications. Their responses are presented in Table 5.82.

Table 5.82: Course writers and coordinators' preference for the mode of delivery (Conventional or ODL) to upgrade their educational levels

Statements of preferences	Number of responses per Institution		
	Private, N (%)	Government, N (%)	Total
I choose conventional as it engages the learner in direct contact with the instructor.	1 (12.5)	2 (18.2)	3 (15.8)
I prefer the conventional approach as devotion and commitment are better in conventional than in ODL.	1 (12.5)	1 (9.1)	2 (10.5)
I prefer conventional as it is easy to develop competencies.	0 (0.0)	2 (18.2)	2 (10.5)
I prefer the conventional method as it functions with centrally developed schedule.	0 (0.0)	1 (9.1)	1 (5.3)
ODL because it is more flexible, cost-effective, individualised and home-based learning system.	3 (37.5)	2 (18.2)	5 (26.3)
Prefer ODL approach as it does not obstruct my regular routines.	2 (25.0)	1 (9.1)	3 (15.8)
I prefer ODL because it helps me to manage my time and stay with family during the learning time.	1 (12.5)	2 (18.2)	3 (15.8)
Total	8 (100.0)	11 (100.0)	19 (100.0)

Table 5.82 shows that 5 (26.3%) of them preferred ODL to the conventional mode as it is more flexible, cost-effective, individualised and a home-based learning system. A significant number of respondents (18.2%) said they preferred a conventional approach as it engages the learner in direct contact with their instructor. The same number of respondents (18.2%) indicated that they preferred ODL as it did not obstruct their routines and because it helped them to manage their time and stay with their families while studying. A comparison between the private and government institutions shows that six out of 11 respondents (government) preferred the conventional modality, while six out of eight respondents in private institutions showed interest in ODL for different reasons listed in Table 5.82. Altogether, five of the 11 government respondents said they preferred the ODL approach to further their academic qualifications.

5.3.6 Course Writers' Understanding of the Structure of the Learning Materials

As discussed in the previous sections, when an ODL course is first conceived and planned, it starts with analysing the students for whom the course is intended and defining the educational objectives. Moreover, as it is made clear in Chapter 3, Section 3.4, ODL materials should be fully self-contained on modular basis as distance learners may not have access to libraries or other reference materials. Hence, ODL materials must be highly structured and didactic with precise instructions on what the student is expected to do (Yousuf et al., 2008:124). This means that the text should have self-assessment questions, illustrations, activities, a summary, a glossary and a bibliography. It should also be written in an easy and simple language. According to Rashid, Mahmood, Khokhar and Rashid (2014:59), SIM with the above structure require a course development team that needs to meet all the basic requirements of distance learners so that they may achieve the optimal learning objectives. This course development team generally includes writer, coordinator, editor, designer and print manager.

5.3.6.1 Course writers' understanding of the approach used in preparing DL materials

Section 5.3.5 discussed the type of training the CW attained to write modular materials and their understanding of ODL. In this section, the effects of their knowledge and training acquired are discussed based on the responses collected, mainly from the course writers. The responses from the CW are indicated in tables for different sets of questions, for example, Table 5.83 presents the responses of CW about the approach they followed to prepare modular materials.

Table 5.83: The approach followed by CW while preparing the modules

Approach followed by course writers	Distribution of responses per institution					
	Government		Private		Total	
	N	%	N	%	N	%
Course team approach	3	33.3	3	50.0	6	40.0
Individual approach	6	66.7	3	50.0	9	60.0
Total	9	100.0	6	100.0	15	100.0

As shown in the table, two-thirds of the CW from the government institutions prepared the learning materials separately or individually, while those from the private institutions were split equally, since three (50.0%) CW said they wrote the modules individually while the other three used a course-team approach. Table 5.83 indicates that 60% of the CW from both institutions (private + government) followed the individual approach when writing the learning materials. Withreference

to the theoretical framework, it is argued that if DL materials are to serve the purposes of SIM, they should be prepared by a group of experts with different skills in material development.

The CW were also asked to state the advantages, disadvantages and difficulties they encountered while following the approach they chose in writing DL materials. Their responses are presented in Tables 5.84 and 5.85 respectively.

Table 5.84: Advantages and disadvantages of the course team approach suggested by CW

Advantages obtained	Disadvantages/difficulties experienced
Created team spirits, enhanced exchange of knowledge.	Reduces the quality of the module.
It allowed tasks to be shared and input contributions.	Unequal contribution and less efficiency in managing tasks.

Table 5.85: Advantages and disadvantages of individual approach suggested by CW

Advantages obtained	Disadvantages/difficulties experienced
It gave me the freedom to make decisions and to dig out various sources required for the course.	It consumed time.
It enabled me to focus on the task individually based on my personal plan (time frame) and finalise it timeously.	It did not allow discussion; learning can be taking place when there is discussion among participants.
It had financial advantage.	One might not have rich knowledge on the course and skills of module writing and brought frustration to the writer and hence might cast shadow on the quality of the materials.
It encouraged me to direct every learner to give attention for the course work.	It did not enable me to share ideas and get feedback from fellow CW.
It enabled me to provide clear, understandable and best approaches to identify mistakes and irregularities.	It put much burden to the editor and dalliance of submission of the material following a schedule.
It helped me to keep the uniformity of the module with other modules.	It was all a lot of burden.
	Overloaded me to provide additional questions and to help learners to grasp the modular courses.

As displayed in Table 5.84, and referring to Table 5.83, the CW from the private institutions seemed to be critical of the course-team approach. Similarly, Table 5.85, with reference to Table 5.83, shows that CW from the government universities believed that preparing course materials following the individual approach gave them benefits like freedom to make decisions and to dig out various sources required for the course, to focus on the task individually based on their plan (timeframe) and to finalise preparing the course materials timeously.

5.3.6.2 Course writers' understanding of the need for preparation of a course plan before writing course materials

The CW were also requested to state whether they prepared a course plan and why preparing a detailed course plan prior to writing the course material was necessary.

Table 5.86: Course writers' responses about the preparation of course plans before writing modules

Did you prepare a course plan?		Distribution of responses/institution				
		Government		Private		Total (%)
		N	%	N	%	
Valid	Yes	7	77.8	6	100.0	13 (86.7)
	No	2	22.2	0	0.0	2 (13.3)
Total		9	100.0	6	100.0	15 (100.0)

As indicated in Table 5.86, 13 of the 15 respondents said they prepared the course plans and were also able to explain the benefits they acquired from doing so.

Table 5.87 displays a summary of the responses acknowledged as the benefits by the CW who believed that getting course plans prior to writing course materials for DL was necessary.

Table 5.87: Course writers' benefits from preparing course plans before writing course materials

Benefits obtained in preparing course plan as suggested by course writers	
1.	It is a roadmap guiding the development of structured and sequential modular materials.
2.	Course plan is used to manage time, and to identify the topics we add and reject to achieve the required aims of the course.
3.	It guides the extent to which course writer is complying with the subject matter.
4.	Plan helps to manage all resources effectively.
5.	Course plan helps to set the course objectives and goals.

6.	Course plan directs how to manage all the inputs required for course development.
7.	Planning makes activities easier.
8.	Detailed course plan would give the writer when & how assessment on the effectiveness of the course materials might be done.

The proposed benefits can help an ODL course writer to organise all activities starting from the preparation stage to the execution stage based on the agreed upon plan which needs to be set out in advance.

5.3.6.3 Course writers' views on the design of course materials in modular forms

According to Rahman (2006:56), DL courses are organised in such a way that they are made up of linked but discrete modules while the latter is referred to as self-sufficient study material. A module is a set of printed learning materials that consist of well-planned teaching notes and activities, which have been carefully laid out for students to work on independently at their own pace. In line with Rahman's description of a module, the researcher investigated whether the CW followed modular structures when preparing ODL course materials and their reasons for that. A set of questions were posed to respondents and their responses are tabulated in Table 5.88.

Table 5.88: Distribution of course writers' responses on the use of modular form in designing DL course materials

Were you trained on modular design of learning materials?		Distribution of responses/institution				
		Government		Private		Total (%)
		N	%	N	%	
Valid	Yes	8	88.9	5	83.3	13 (86.7)
	No	1	11.1	1	16.7	2 (13.3)
Total		9	100.0	6	100.0	15 (100.0)

As portrayed in Table 5.88, 13 of the CW from both government and private institutions revealed that they prepared the ODL materials in modular form and only one course writer from each sector did not receive the necessary training to do this. This signifies that nearly all the CW understood how to write the courses in a modular form.

The course writers were also requested to explain why they preferred preparing ODL materials in a modular format. Table 5.89 summarises the reasons from both types of institutions as to why they follow a modular structure when preparing course materials.

Table 5.89: Summary of course writers' reasons for preparing ODL materials in a modular form

Suggested reasons for designing ODL materials in a modular form
1. It is very helpful to students in addressing the core concepts of the course in manageable blocks.
2. It helps distance learners to have all the aspects related to the course with simple expression.
3 Modular forms motivate ODL learners to learn as they consist of properly organised coherent topics in moderate chunks.
4. A modular form approach enables every learner to read the material and easily gain the coursework sooner as it is supported by access devices.
5. A modular form provides an A-Z picture of the course systematically in interconnected pieces of blocks which are self-contained on their own.
6. A modular form enables the learner to catch up the competencies piece by piece.
7. A modular style determines the quality of the material. If it is written in a good manner, a modular form could enhance individual learning.
8. Modules motivate distance learners to keep engaged in independent learning and builds the confidence of the learner by ensuring that parts of the whole course are covered in the process of completing a given module.

The reasons mentioned in Table 5.88 and Table 5.89 can be placed under three main propositions:

- i. Modular materials motivate distance learners to keep reading as they present well organised and interconnected lessons to the learner.
- ii. Modular materials enable distance learners to acquire the intended competencies through built-in mechanisms for evaluating their progress.
- iii. Modular materials can promote the quality of training undertaken as they engage responsible learners in independent study with all the required support that the learner needs using access devices.

5.3.6.4 Course writers' understanding of course material development in DL

One of the objectives of the study was to see whether the CW in government and private institutions had different perceptions of the development of ODL course materials. Therefore, a t-test test was appropriate for the analysis of variance (ANOVA). According to Dumont (2019:2), the t-test (student's t-test) is probably the most used statistical data analysis for hypothesis testing (two groups). The t-test is appropriate to perform this task as it assesses whether the means of two groups are statistically different from each other. The differences between the scores for two

groups can enable researchers to judge the difference between their means relative to the spread or variability of their scores.

There are different types of t-tests: independent samples t-test, paired samples t-test and one sample t-test. Independent samples t-test compares the mean scores (on some continuous variable) for two different groups of participants. It is used in this study to analyse the differences in the perceptions of CW from the government and private institutions regarding different stages of course development.

It is essential to consider the following assumptions while applying a t-test:

1. Data are from a normally distributed population.
2. Data are measured at least at the interval level and independent-sample t-test further assumes that:
 - i. Variances in these populations are roughly equal (homogeneity of variance); and
 - ii. Scores are independent (because they come from different people).

This section discusses the CW knowledge of the inclusion of access devices/advance organisers in ODL materials; their understanding of writing statements of learning objectives in ODL materials; and their opinions regarding the length of time they were provided to write the distance course materials.

- CW knowledge of inclusion of access devices/advance organisers in ODL materials

According to COL (2005:131), ODL course materials are written with the inclusion of access devices to help learners find their way around the materials. They serve two purposes: to make the structure of the course material clear and help learners understand how they can use that material. Also known as advance organisers, access devices are usually placed before starting a unit, during their study of the unit, or when they have completed the unit.

Welch's t-test was used as the sample sizes for the government and private CW were not the same. In Welch's t-test, equal variances are not assumed.

Table 5.90 presents the distribution of the CW levels of agreement from the private and government institutions together with the values of degree of freedom, t-statistics and two-tailed p for the responses.

Except for the provision of a time frame for each learning task given in the learning materials, for which $p = 0.024$, the two-tailed p values were found to be larger than 0.05 (assumed for 95% confidence interval). A comparison made between values of t -critical, t_c and t -statistics, t_s , (cf. Appendix J) for values of df is presented below.

Table 5.90: Course writers' knowledge of the inclusion of access devices or advance organisers in ODL materials

Statements	Institution	Level of agreement			Total	df	t (df)	2-s p
		YTA	OTS	N@A	N, %			
		n, %	n, %	n, %	N, %			
Instructions for different tasks were included.	Gov.	6, 66.7	3, 33.3	0, 0.0	9, 100.0	12.31	0.707	
	Priv.	6, 100.0	0, 0.0	0, 0.0	6, 100.0			
Learning objectives were included in the modules. ^a	Gov.	9, 100.0	0, 0.0	0, 0.0	0, 0.0	----	----	----
	Priv.	6, 100.0	0, 0.0	0, 0.0	6, 100.0			
Time frame was provided to each learning task.	Gov.	4, 44.4	4, 44.4	1, 11.1	9, 100.0	12.57	-	0.024
	Priv.	4, 66.7	0, 0.0	2, 33.3	6, 100.0			
Introductions were provided to different structures of the course materials. ^a	Gov.	9, 100.0	0, 0.0	0, 0.0	0, 0.0	----	----	----
	Priv.	6, 100.0	0, 0.0	0, 0.0	6, 100.0			
Intext questions were provided in the modules.	Gov.	6, 66.7	3, 33.3	0, 0.0	9, 100.0	12.31	0.707	0.493
	Priv.	5, 83.3	1, 16.7	0, 0.0	6, 100.0			
Self-check exercises were included in the learning materials.	Gov.	8, 88.9	1, 11.1	0, 0.0	9, 100.0	8.00	1.000	0.347
	Priv.	6, 100.0	0, 0.0	0, 0.0	6, 100.0			
Learning activities were included in the modules.	Gov.	7, 77.8	2, 22.2	0, 0.0	9, 100.0	11.47	0.250	0.807
	Priv.	5, 83.3	1, 16.7	0, 0.0	6, 100.0			
Summaries were included at the end of units.	Gov.	5, 55.6	4, 44.4	0, 0.0	9, 0.0	12.31	0.707	0.493
	Priv.	5, 83.3	1, 16.7	0, 0.0	6, 100.0			
Model/actual answers were provided to self-check exercises and activity questions.	Gov.	7, 77.8	2, 22.2	0, 0.0	9, 100.0	11.47	0.250	0.807
	Priv.	5, 83.3	1, 16.7	0, 0.0	6, 100.0			

Note: YTA = Yes to all, OTS = Only to some, N@A = Not at all, 2-s p = Two-sided p

Table 5.91: Comparison between t_c & t_s values based on df

df	t_s	t_c	Remark	Expected result
12.31	0.707	2.179	$t_c > t_s$	There is no sufficient evidence to say the means of the two populations are significantly different.
12.57/2.565/		2.16	$t_s > t_c$	Reject the null hypothesis: the means differ significantly.
12.31	0.707	2.179	$t_c > t_s$	There is no sufficient evidence to say the means of the two populations are significantly different.

"a t cannot be computed because the standard deviations of both groups are 0." No difference was registered regarding these access devices; and the CW synonymously included learning objectives and introductions to each unit in the learning materials.

Based on the comparison made in Table 5.91, except for the allocation of time for different tasks, the CW at private and government institutions were found to have significantly similar understanding about the inclusion of access devices in the courses they prepared for distance learners. Concerning the allocation of working time to each learning task provided in the modules, $t_s > t_c$, it was necessary to determine the effect size as the researcher had to reject the null hypothesis of the test. This indicates that the means of the two responses differed significantly. Hence, using the formula of Cohen's 'd', the effect of size was determined as follows:

$$d = \frac{M_1 - M_2}{\sqrt{\frac{SD_1^2 + SD_2^2}{2}}}$$

Where M_1 and M_2 are the means of the responses, SD_1 and SD_2 are the standard deviations. As seen in Appendix H, $M_1 = 2.50$ and $M_2 = 1.67$, $SD_1 = 0.548$, $SD_2 = 0.707$.

$$\Rightarrow d = (2.50 - 1.67) / \sqrt{[(0.548)^2 + (0.707)^2] / 2}$$

$$\Rightarrow d = 0.83 / 0.63 = 1.32$$

According to Cohen's **d**: 0.2 to 0.3 might be a "small" effect, around 0.5 a "medium" effect and 0.8 to infinity, a "large" effect. The value detected, $d = 1.32$, therefore, has a large effect. This implies that the difference between the two means did not occur by chance; rather, it could be because of their exposure to the system. The difference occurred because eight out of nine CW from government institutions replied that they provided a time frame (four of them did fully and four others did only to some of the learning tasks), while only four of the private ones did this.

The CW were also requested to share their experiences on how they fixed the length of the study time for distance learners. As shown in Table 5.90, eight CW from both government and private institutions responded that they provided working time to each learning task in the modules and four others replied that they fixed study time only in some of the learning tasks. These respondents shared what they figured out while preparing the scripts of the modules. Of the government respondents who said they budgeted time for different tasks in the learning modules, half of them reported that they allocated working time based on the nature and difficulty level of a lesson. Two other government CW cited the principles of measurement and evaluation as their basis for fixing the learning time in the modules. Similarly, two CW from private institutions described the volume of the content as a reference point for allocation of the study time. Four CW from both types of institutions (two from each type) mentioned that they followed the directions communicated by the nationally authorised responsible body.

- Understanding of course writers of writing objectives in the ODL materials

Having served as a teacher and an instructor where I prepared ODL course materials for physics courses at higher education level, I understand that learning objectives are access devices or advance organisers that orientate both the learner and the instructor about the knowledge, attitude and skills that would be developed after attending a specific programme or training. According to Soulie and Cosson (2021:3190), learning objectives enable CW to structure the whole programme around a target group in a coherent way. They direct them on how to frame the overall structure of the learning programme, the list of necessary courses to be included, how far to go and what learning methods to use within each course. They also enable CW to define how the examinations should be organised. The CW from both institutions were asked why they included the learning objectives (if any) in the modules they prepared. Fifteen of the respondents answered the questions forwarded to them, as reflected in Table 5.92, which presents the reasons expressed by the CW.

Table 5.92: Distribution of course writers' levels of agreement on writing statements of learning objectives in ODL materials

Proposed reasons for inclusion of learning objectives	Institution	Level of agreement					Total N, %	df	t (df)	2-sp
		SA	A	UNC	DA	SDA				
		n, %	n, %	n, %	n, %	n, %				
Directed to include them in the learning materials.	Gov.	1, 11.1	3, 33.3	2, 22.2	2, 22.2	1, 11.1	9, 100.0	8.18	-0.065	0.950
	Priv.	2, 33.3	2, 33.3	0, 0.0	1, 16.7	1, 16.7	6, 100.0			
They were devices directing me what contents should be presented to the learner.	Gov.	5, 55.6	3, 33.3	1, 11.1	0, 0.0	0, 0.0	9, 100.0	7.00	0.095	0.927
	Priv.	4, 88.7	1, 16.7	1, 18.7	0, 0.0	0, 0.0	6, 100.0			
They were devices used to limit the content to be presented to the learner.	Gov.	3, 33.3	4, 44.4	2, 22.2	0, 0.0	0, 0.0	9, 100.0	10.52	-0.525	0.610
	Priv.	3, 50.0	3, 50.0	0, 0.0	0, 0.0	0, 0.0	6, 100.0			
They were devices that guided me to evaluate students' learning.	Gov.	3, 33.3	4, 44.4	2, 22.2	0, 0.0	0, 0.0	9, 100.0	10.52	-0.525	0.610
	Priv.	3, 50.0	3, 50.0	0, 0.0	0, 0.0	0, 0.0	6, 100.0			
They were devices that enabled me to design how, what and when should learning experiences be presented.	Gov.	3, 33.3	3, 33.3	3, 33.3	0, 0.0	0, 0.0	9, 100.0	11.33	-0.756	0.465
	Priv.	3, 50.0	3, 50.0	0, 0.0	0, 0.0	0, 0.0	6, 100.0			
They were devices that guided me to create links between previous learning experiences with current ones.	Gov.	2, 22.2	5, 55.6	2, 22.2	0, 0.0	0, 0.0	9, 100.0	7.12	0.00	1.000
	Priv.	3, 50.0	2, 33.3	0, 0.0	1, 16.7	0, 0.0	6, 100.0			

Note: - SA- strongly agree, A -agree, UNC- undecided, DA -Disagree, SDA- Strongly Disagree

Table 5.92 shows that for all cases, the two-tailed p values were larger than 0.05 (for 95% confidence interval) which rejects Welch's proposition and implies that the differences between the means of the responses were not that significant. The CW from both private and government institutions were found to have a significantly similar understanding on writing statements of

learning objectives in ODL materials. On the whole, the CW were in agreement on the reasons they gave, except for the reason that referred to the inclusion of learning objectives in the learning materials which received eight responses. Most of the CW from both institutions (13 out of 15) mentioned the following reasons as superior to the others: writing learning objectives served as guides to direct what and how much content to be presented to the learner; and they were devices that guided them to evaluate their students' learning. Similarly, the reasons for designing where, when and what learning experiences should be presented to students and creating links between previous and current learning experiences was mentioned by 12 respondents.

The CW were also asked whether they required their distance learners to consult books besides their modules and to contact professionals to get support in their learning. Their responses are summarised in Table 5.93.

Table 5.93: Distribution of course writers' level of agreement on requiring ODL learners to consult books and professionals

Statement	Institution	Level of agreement			Total	df	t (df)	2-s p
		YTA	OSU	N@A	N,			
		n,%	n,%	n,%	%			
Required students to refer to additional books other than their modules and to consult professionals.	Gov.	7, 77.8	2, 22.2	0, 0.0	9, 100.0	8.000	1.512	0.169
	Priv.	5, 83.3	1, 16.7	0, 0.0	6, 100.0			

YTA = Yes to all units, OSU = Only to some units, N@A = Not at all

In Table 5.93, the Welch's t- test summary shows that $p = 0.169 > 0.05$, which means that the differences between the means of the responses were not that significant. Thus, Welch's proposition is rejected. The CW at both types of institutions required their distance learners to consult books and contact professionals in their fields of study. A large number of CW from both institutions, 12 out of 15 (80.0%) required their ODL students to refer to additional books and to consult professionals in the field. However, this made the modules lack one of the fundamental characteristics of SIM, namely being self-contained. The same CW were also asked whether the time they were given to write distance materials was enough to prepare them in modular format. The responses of the CW are presented in Table 5.94.

Table 5.94: Course writers' understanding of the length of time needed to write distance course materials

Statement	Institution	Level of agreement				Total					
		A	MA	IA	DIA						
		n,%	n,%	n,%	n,%	N,%	M	S.D.	df	t (df)	2-s p
Length of time provided to write distance course materials	Gov.	4, 44.4	0, 0.0	5, 55.6	0, 0.0	9, 100.0	1.89	1.054			
	Priv.	4, 66.7	0, 0.0	2, 33.3	0, 0.0	6, 100.0	1.33	0.816	12.58	1.147	0.273

A =Adequate, MA = More than adequate, IA=Inadequate, DIA= Disappointingly inadequate

As Table 5.94 shows, the results of Welch's independent sample t-test indicate that more than half of the participating CW, 5 out of 9 (55.6%) in the government institutions answered that the time given to write distance modular materials was not adequate, while only two out of six respondents (33.3%) from the private sector responded that they were inadequate. Similarly, more than half of the CW from the private institutions said the time given was adequate while less than half of the respondents from the government institutions indicated that they were adequate. There seems to be a significant difference between the responses of respondents from the government and private institutions with $p = 0.273$ although the Welch's t-test assumes unequal means of responses for $p < 0.05$.

The CW were also requested to share their opinions on the support they obtained from both subject and language editors of the institutions for which they prepared the learning materials. Only eight of them (four respondents from the government institution and four from the private institution) responded to the open-ended question and the responses are summarised in Table 5.95.

Table 5.95: Types of support received by the CW from the course editors and their distribution

Support received by the CW from the editors	Number of responses per Institution		
	Private	Gov.	
	N (%)	N (%)	Total
Received constructive comments to write the course modules effectively through restructuring the coherence of the content.	2 (50.0)	2 (50.0)	4 (50.0)
Received encouraging feedback like correcting diagrams and excluding some. But it was a bit complex exercise.	0 (0.0)	1 (25.0)	1 (12.5)

Support received by the CW from the editors	Number of responses per Institution		
	Private	Gov.	
	N (%)	N (%)	Total
Got the benefit in modifying the objectives of the modules.	2 (50.0)	0 (0.0)	2 (25.0)
Got the sequence of units to be adjusted by the editor, and phonetical errors were edited.	0 (0.0)	1 (25.0)	1 (12.5)
Total	4 (100.0)	4 (100.0)	8 (100.0)

As can be seen in Table 5.95, only eight out of 15 CW (four from six of private and four from 9 of the government streams) said they received support from the course editors. By comparison, it seems that those from the private stream had links with the editors, as four out of six (66.7%) benefited from the input of the editors, while only four out of 9 (44.4%) of the government stream received support from the editors. Among the four types of benefits mentioned by the CW, the largest benefit acquired by both streams (50.0%) was that the support was linked to restructuring of the contents to keep them coherent. Two of those in the private stream (50.0%) explained that they had also received support in modifying the objectives of the modules.

To make the study relatively inclusive, I sought the opinions of the CW in addition to responding to a structured questionnaire. Of the 15 CW, 13 gave their comments on the whole process of course preparation. Their responses have been transcribed, categorised based on themes and analysed quantitatively as shown in Table 5.96.

Table 5.96: Course writers' views on aspects to consider for effective preparation of ODL modules

Opinions of CW on effective writing	Number of responses per Institution		
	Private	Gov.	
	N (%)	N (%)	Total
CW should be trained to be able to write the modules for the target group.	3 (42.9)	4 (57.1)	7(100.0)
Both the writers and the editors should agree to communicate to share knowledge and skills and on the objectives of the course for the benefit of the distance learner.	5 (50.0)	5 (50.0)	10 (100.0)
Appropriate length of time should be invested to prepare learning modules for ODL.	2 (28.6)	5 (71.4)	7 (100.0)
Institutions working in ODL approaches should have their own	4 (40.0)	6 (60.0)	10 (100.0)

Opinions of CW on effective writing	Number of responses per Institution		
	Private	Gov.	
	N (%)	N (%)	Total
inhouse styles.			
Better if ODL materials are administered by course specialists and modular format editors who have got expertise in writing and editing ODL materials.	6 (46.2)	7 (53.8)	13 (100.0)
Interested, unbiased and capable scholars should be given the chance to prepare DL modules as it requires effort and dedications to keep standard.	5 (45.5)	6 (54.5)	11 (100.0)

As shown in Table 5.96, the larger number of CW, 13 out of 15, with 7 (53.8%) from the government and 6 (46.2%) from the private sector said if quality materials are to be served for distance learners, it is better to have the materials written by professionals with expertise in the ODL system. They indicated that for standardised ODL materials to be prepared, scholars with capability, interest and objectivity regarding the approach should write the courses. This was the second most popular reason as it was reported by 11 respondents, with 6 (54.5%) from government institutions and 5 (45.5%) from private institutions. The CW commented that an inhouse style should be used by an institution working in an ODL environment and that there should be agreement between the writers and the editors regarding communicating on sharing knowledge and skills and on the objectives of the courses if distance learners are to benefit from the ODL materials. The CW from the government sector mentioned the allocation of appropriate time for module writing and the need for proper communication to be established between CW and editors for effective ODL course preparation. Except for the length of time required to prepare ODL materials, the CW from the two sectors seemed to have similar opinions that should be considered for the improvement of ODL materials.

5.3.7 Course Writers and Coordinators' Perceptions of the Preparation, Implementation and Execution Aspects of ODL Course Development

In ODL, the production of all study materials is the responsibility of a course development team, yet different personnel involved are equally responsible for smooth conduct of the material development process. The success of the development of ODL materials depends upon the mutual coordination among CC and CW, and their relationship needs to be focused on

exchanging ideas and discussing educational problems to produce good, up-to-date study materials (Yousuf et al., 2008:134).

This section analyses how CW and CC from the government and private institutions perceived the whole process of course development: preparation, implementation and execution. Their responses to a set of questions organised according to the stages mentioned above are presented in Table 5.97 and Table 5.97*. Since the sample sizes for the government and private CW were different, the researcher used Welch's t- test that assumes unequal variances. Table 5.97 presents the distribution of levels of agreements of the CW and CC (in combination) from private and government institutions, values of degree of freedom, t-statistics and two-tailed p values for the responses.

Table 5.97: Course writers and coordinators' perceptions of the preparation aspects of course development

Statements	Institution	Level of agreement					Total	df	t (df)	2-s p
		SA	A	UNC	DA	SDA				
		n,%	n,%	n,%	n,%	n,%	N,%			
Complete schemes of studies were provided to the course writers.	Gov.	4, 36.3	3, 27.3	3, 27.3	1, 9.1	0, 0.0	11, 100.0	15.704	-458	.653
	Priv.	3, 37.5	4, 50.0	0, 0.0	1, 12.5	0, 0.0	8, 100.0			
A format for unit writing was provided to be followed.	Gov.	7, 63.6	2, 18.2	1, 9.1	1, 9.1	0, 0.0	11, 100.0	14.862	-.279	.784
	Priv.	6, 75.0	1, 12.5	0, 0.0	1, 12.5	0, 0.0	8, 100.0			
A process for writing DE material was explained and conveyed.	Gov.	5, 45.4	3, 27.3	1, 9.1	2, 18.2	0, 0.0	11, 100.0	13.780	-.637	.535
	Priv.	2, 25.0	6, 75.0	0, 0.0	0, 0.0	0, 0.0	8, 100.0			
Sufficient time was given for writing a course unit.	Gov.	3, 27.3	1, 9.1	0, 0.0	5, 45.4	2, 18.2	11, 100.0	16.249	-.262	.797
	Priv.	2, 25.0	1, 12.5	0, 0.0	5, 62.5	0, 0.0	8, 100.0			
	Gov.	0, 0.0	0, 0.0	2, 18.2	6, 54.5	3, 27.3	11, 00.0	9.918	-1.161	.273

Statements	Institution	Level of agreement					Total	df	t (df)	2-s p
		SA	A	UNC	DA	SDA				
		n,%	n,%	n,%	n,%	n,%	N,%			
Language experts were involved in the process of course development.	Priv.	1,12.5	1,12.5	0,0.0	5,62.5	1,12.5	8,100.0			
Subject specialists were involved in the process of course development.	Gov.	6,54.5	5,45.4	0,0.0	0,0.0	0,0.0	11,00.0	8.451	.573	.582
	Priv.	5,62.5	2,25.0	0,0.0	0,0.0	1,2.5	8,100.0			
Teaching materials were tried out.	Gov.	2,18.2	0,0.0	1,9.1	6,54.5	2,18.2	11,100.0	16.481	-1.364	.191
	Priv.	1,12.5	3,37.5	1,12.5	3,37.5	0,0.0	8,100.0			
There was proper coordination among the personnel of course production.	Gov.	5,45.4	3,27.3	1,9.1	2,18.2	0,0.0	11,00.0	14.474	.433	.671
	Priv.	2,25.0	4,50.0	1,12.5	0,0.0	1,12.5	8,100.0			

As is shown in Table 5.97, for all statements, the two-tailed p values exceeded 0.05 (assumed for a 95% confidence interval). An analysis of the comparison made between values of t - critical, t_c and t - statistics, t_s , for values of df is presented below.

Table 5.97*: Comparison between values of t_c & t_s based on the value of df

Statements #	1	2	3	4	5	6	7	8
df	15.7	14.86	13.78	16.25	10	8.45	16.48	14.47
t_s	/-.458/	/-.279/	/-.637/	/-.262/	/-1.16/	0.573	/-1.36/	0.433
t_c	2.12	2.13	2.15	2.12	2.23	2.31	2.12	2.15
Remark	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$
Analysis made	There is not sufficient evidence to say the means of the two populations are significantly different across eight of statements.							

Based on the comparison made in Table 5.97*, the CW and CC (in combination) of private and government institutions were found to have significantly similar perceptions of the preparation aspects of course development.

It is evident from Table 5.98 and Table 5.98* extracted from t that the t-critical value for each statement is larger than t-statistic value (cf. Appendix J). This means that the study fails to reject the null hypothesis as there is not sufficient evidence to say that the means of the two populations are significantly different. The CW and CC (in combination) from the private and government institutions agreed significantly on the statement addressing the implementation aspect of course development.

Table 5.98: Course writers and coordinators' perceptions of the implementation aspects of course development

Statements	Institution	Level of agreement					Total N,%	df	t (df)	2-s p
		SA	A	UNC	DA	SDA				
		n,%	n,%	n,%	n,%	n,%				
Courses developed reflect new knowledge.	Gov.	6, 54.5	4, 36.4	1, 9.1	0, 0.0	0, 0.0	11, 100.0	11.751	.809	.434
	Priv.	3, 37.5	4, 50.0	0, 0.0	1, 12.5	0, 0.0	8, 100.0			
The courses have the potential to meet the future needs of students.	Gov.	4, 36.4	3, 27.3	4, 36.4	0, 0.0	0, 0.0	11, 100.0	13.493	1.077	.300
	Priv.	2, 25.0	1, 12.5	4, 50.0	1, 12.5	0, 0.0	8, 100.0			
The courses equip the students with better professional insight and skill.	Gov.	6, 54.5	3, 27.3	2, 18.2	0, 0.0	0, 0.0	11, 100.0	12.054	1.047	.316
	Priv.	3, 37.5	2, 25.0	2, 25.0	1, 12.5	0, 0.0	8, 100.0			
The courses were developed to be self-instructional.	Gov.	3, 27.3	2, 18.2	5, 45.4	1, 9.1	0, 0.0	11, 100.0	16.716	-.558	.584
	Priv.	2, 25.0	3, 37.5	3, 37.5	0, 0.0	0, 0.0	8, 100.0			
Teaching materials were appropriate for target students.	Gov.	5, 45.4	6, 54.5	0, 0.0	0, 0.0	0, 0.0	11, 00.0	8.801	1.238	.248

	Priv.	2, 25.0	5, 62.5	0, 0.0	0, 0.0	1, 12.5	8,100.0			
Teaching materials were attractively presented.	Gov.	2, 18.2	2, 18.2	2, 18.2	5, 45.4	0, 0.0	11,100.0	15.435	.162	.873
	Priv.	1, 12.5	2, 25.0	1, 12.5	4, 50.0	0, 0.0	8, 100.0			
Teaching materials were up to date.	Gov.	3, 27.3	1, 9.1	5, 45.4	2, 18.2	0, 0.0	11,100.0	16.742	.485	.634
	Priv.	0, 0.0	3, 37.5	4, 50.0	1, 12.5	0, 0.0	8, 100.0			
The revision of courses was invited in light of new trends.	Gov.	5, 45.4	1, 9.1	1, 9.1	4, 36.4	0, 0.0	11, 00.0	16.008	.215	.832
	Priv.	2, 25.0	3, 37.5	0, 0.0	3, 37.5	0, 0.0	8,100.0			

Table 5.98*: Comparison made between values of t_c & t_s based on the value of df

Statements #	1	2	3	4	5	6	7	8
df	11.751	13.493	12.054	16.716	8.801	15.435	16.742	16.008
t_s	0.809	1.077	1.047	/-.558/	1.238	0.162	0.485	0.215
t_c	2.179	2.16	2.179	2.11	2.262	2.131	2.11	2.12
Remark	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$	$t_c > t_s$
Analysis made	Except for 2 & 7, there is not sufficient evidence to say the means of the two populations are significantly different across the statements.							

To get a complete understanding of the CW and CC views about the development of course materials for ODL, they were requested to share the experiences they had on the execution aspect of course development. Their responses are presented in Table 5.99 below. To make the analysis more concrete, Table 5.99* has been created with data extracted from Table 5.99 and standard values of t-critical. As indicated in Table 5.99* below, the t-critical values (taken as standards for reference) exceeded the absolute values of t-statistic for those statements that the CW and coordinators from the private and government institutions agreed with closely.

Referring to Table 5.99*, regarding statements # 2 and # 7 on the promotion of work done by using mass media to inform the masses about the provision of courses via ODL system and whether students' activities were adequately provided in the course materials, the absolute value

of t statistics, t_s , is greater than the value of t critical, t_c , i.e., $|t_s| > t_c$. In such cases, the effect size should be determined as the means of the two responses differ significantly.

The effect size is calculated by applying Cohen's d formula as follows:

$$d = \frac{M_1 - M_2}{\sqrt{\frac{SD_1^2 + SD_2^2}{2}}}$$

Dealing with statement # 2, as it is displayed in **appendix-ix**, $M_1 = 2.45$, $M_2 = 4.38$, $SD_1 = 0.688$, $SD_2 = 0.518$ (where M = Mean, and SD = Standard Deviation).

$$\Rightarrow d_2 = (4.38 - 2.45) / \sqrt{[(0.688)^2 + (0.518)^2] / 2}$$

$$\Rightarrow d_2 = 1.93 / 0.61 = 3.16$$

And calculation for statement # 7 results:

$$\Rightarrow d_7 = (4.25 - 3.27) / \sqrt{[(0.905)^2 + (0.707)^2] / 2}$$

$$\Rightarrow d_7 = 0.98 / 0.812 = 1.21$$

Referring to the ranges of values of Cohen's 'd', the detected values, $d_2 = 3.16$ & $d_7 = 1.21$ fall in the range having larger effects. The explanation made here is that the differences between the two coupled means are not by chance. Rather, as the responses show, while most of the respondents, 63.6%, from the government institutions disagreed with the statement relating to the promotion of work done using mass media to sensitise the masses to the provision of courses via the ODL system, all the respondents from the private institutions agreed with the statement. Similarly, while 87.5% of the respondents from the private institutions agreed that the course materials consisted of the students' activities adequately, only 54.5% of the respondents from the government institutions agreed. What contributed more to the differences is that 27.3% of the respondents from the government institutions disagreed that the activities were adequate in the course materials they developed.

Table 5.99: Course writers and coordinators perceptions of the execution aspects of course development

Statements #	1	2	3	4	5	6	7	8
df	16.057	16.952	15.657	16.749	11.200	16.181	16.860	16.981
t _s	1.579	-6.945/	0.288	-1.133/	0.398	.025	-2.641/	-.664/
t _c	2.12	2.11	2.13	2.11	2.20	2.12	2.11	2.11
Remark	t _c > t _s	t _c > t _s	t _c > t _s	t _c > t _s	t _c > t _s	t _c > t _s	t _c > t _s	t _c > t _s
Analysis made	Except for 2 & 7, there is not sufficient evidence to say the means of the two populations are significantly different across eight of statements.							

5.4 DOCUMENT ANALYSIS

This final section presents the findings of the document analysis generated using the rubric modified to suit this study. The original rubric was that of Research and Development, QM, USA and permission was obtained to use it for research purpose via email from the manager, Ms. Barbra Burch, MPA, on 23 February 2021.

While modifying the rubric, the researcher included some parameters believed to assess whether the ODL materials were able to promote independent learning. The parameters included the use of icons as access devices and were placed under the standards of accessibility and usability to reduce those that were not relevant to the framework of the study. The rubric (Appendix G) was modified and applied to this study.

The rubric consists of a set of eight General Standards (mentioned below) and 42 Specific Review Standards (23 of which are designated as essential) for evaluating the design of ODL courses. The rubric is complete with annotations that explain the application of the standards and the relationship between them.

The eight General Standards are: Course Overview and Introduction; Learning Objectives (Competencies); Assessment and Measurement; Instructional Materials; Learning Activities and Learner Interaction; Course Technology; Learner Support; Accessibility and Usability.

The researcher was required to use the minimum standard that Research and Development, QM fixed for an institution to meet QM review expectations. Essentially, it expects a course/module to satisfy each of the 23 Essential Standards and achieve an overall score of at least 85 (85% of 100 possible points). Following this set standard, the analysis made on the DL materials of courses collected from the four institutions is presented in Table 5.100 below.

Table 5.100: Document analysis made on selected ODL materials using an adapted comprehensive rubric

S.#	Institution	ODL material	Features consisted of	Feature/s lacked or not in good shape	Overall score achieved(in%)	Remark
1.	AAU	Human Resource Management	SCE	Icons, Course objectives, Course introduction, Course code, Unit introduction, Unit objectives, IQ, Self-check lists, Activities, Summary, Glossary & Feedback to SCE & activities	44.8	Missed most of the required access devices
		Financial Markets and Institutions	Course Introduction and Objectives, Unit introduction & objectives, SCE, Summary and Reminder	Icons, course code; Activities, Feedback to SCE & activities & Glossary	75.5	Relatively close to the expected minima
		Math for Management	Course code, Unit introduction, Unit objectives, SCE	Icons, Course objectives, Course introduction, IQ, Activities, Summary, Feedback to SCE & activities & Glossary	53.5	More than half but still below the minima
		Strategic Management	Course code, Unit introduction, unit objectives, SCE	Icons, Course objectives, Course introduction, Course code, Activities, Summary, Feedback to SCE & activities & Glossary	53.5	More than half but still below the minima
		Project Management	Course code, Unit introduction, unit objectives, SCE	Icons, Course objectives, Course introduction, Course code, Summary, Feedback to SCE & activities & Glossary	53.5	More than half but still below the minima
2.	KEU	THE Structure of English	Course code, Course introduction, Course objectives, Course code, IQ, Reminders, Activities, Unit summary, Self-check list, Self-	Icons, Visible diagrams & Organisation, Glossary	80.1	Very close to the minima and needs some revision for improvement

S.#	Institution	ODL material	Features consisted of	Feature/s lacked or not in good shape	Overall score achieved(in%)	Remark
			check Exercise, Feedback to SCE & activities			
		Basic English-II	Course objectives, Course introduction, Course code, Activities, Unit summary, Self-check Exercise	Icons, Self-check list, Feedback to SCE & activities Glossary	77.0	Close to the minimal and needs revision for serious issues
		Basic English Language	Activities, SCE, Summary	Icons, Course objectives, Course introduction, Unit introductions and Unit objectives, Self-checklist, Feedback to SCE & activities, Glossary	43.0	Missed most of the required access devices
		Planning & Analysis	Course objectives, Course introduction, Activities, SCE, Summary	Icons, Unit introductions and Unit objectives, Self-check list, Feedback to SCE & activities & Glossary	65.5	Missed fundamental advance organisers
		Children With Special Needs & Inclusive Education in Pre-School	Icons with clarification of purposes; Course & unit Introductions; Course & unit objectives; IQ; Reminders of key points; Activities, SCE, Unit summary	Self-check list, Feedback to SCE & activities, Clear diagrams, Glossary	75.0	Close to the minimal and needs revision for improvement
3.	UU	Statistics for Mgmt.	Course code, unit introduction, unit objectives, Self-check Exercises, Activities, Feedback to SCE	Icons, Course introduction, Course objectives, Self-check list, Summary, Clear figures, Feedback to SCE & activities & Glossary	62.0	Missed fundamental advance organisers
		Operation and Production Management	Course code, unit introduction, unit objectives, Self-check Exercises, Activities, Feedback to SCE, Summary	Icons, Course introduction, Course objectives, Clear figures, Self-check list, Glossary	66.4	Missed fundamental advance organisers

S.#	Institution	ODL material	Features consisted of	Feature/s lacked or not in good shape	Overall score achieved(in%)	Remark
		Material Management	Course introduction, Course code, Unit introduction, Unit objectives, Summary, SCE, Feedback to SCE (not detail)	Icons, Course objectives, Clear figures, Self-check list, Activities & Glossary	67.5	Missed fundamental advance organisers
		System Analysis and Design	Course introduction, Course code, unit introduction, unit objectives, example, summary, SCE, Feedback to SCE	Icons, Course introduction, Course objectives, Clear figures, Activities, Self-check list, & Glossary	66.5	Missed fundamental advance organisers
		Math for Management	Course code, unit introduction, unit objectives, example, SCE (notadequately), Feedback to SCE	Icons, Course introduction, Course objectives, Summary, Clear figures, Self-check list, Activities, Glossary, Feedback to model questions	60.5	A bit more than half but missed fundamental access devices
4.	RGCOVL	Introduction to Management	Course code, Icons with explanation, Course introduction, Course objectives, Module introduction, Module objectives, Unit introduction, Unit objectives, IQ, Examples, Self-check lists, Activities, SCE, Feedback to SCE & Activities,	Clear figures & diagrams, Glossaries	85.0	Satisfied the minimumrequired point
		Business Communication	Same as to introduction to Management	Same as to introduction to Management	85.0	Satisfied the minima
		Entrepreneurship	Same as to introduction to Management	Same as to introduction to Management	85.0	Satisfied the minima
		Principles of Marketing Management	Same as to introduction to Management	Same as to introduction to Management	85.0	Satisfied the minima

Key: AAU= Addis Ababa University, KEU = Kotebe Education University, UU = Unity University, RGCOVL = Renaissance Global College of Virtual Learning

5.5 CHAPTER SUMMARY

Following the introduction made in Section 5.1, both quantitative and qualitative data were analysed and interpreted. Data collected using structured questions of the questionnaires were analysed with IBM SPSS 27 (28) software to generate quantitative meanings. Similarly, data collected using the open-ended questions were organised according to their thematic areas and then coded for simple computation purposes. Purposely selected learning materials were also analysed for their effectiveness using the already approved rubric that carried a set of criteria as a reference. To deal with the quantitative data and investigate their effects on the main research question and sub-questions, this study asked the CW and CC about the following: demographic details; their understanding of the approach adopted in the course modules and on the nature of subject matter and content presentation of courses. It further probed them about the availability and services obtained from the access devices (student respondents); knowledge and the CW and CC perceptions of ODL; and the preparation, implementation and execution aspects of ODL course development. The validity of the responses was determined using IBM SPSS 27 (28). Accordingly, it was found that many student respondents from the private institutions were relatively able to learn independently compared to students from the government institutions. In addition, student respondents were also able to express their opinions on how their learning materials could be changed into SIM. The IBM SPSS 27 (28) version was also used for the responses from the CW and CC. A χ^2 test was used to assess the existing relationships between independent and dependent variables identified as basic components to determine the quality of ODL materials. An independent t-test was also carried out to evaluate the significance level of differences or similarities of responses given by the CW and CC regarding their perceptions of the preparation, implementation and execution phases of ODL course development. The last section of this chapter evaluated purposely selected DL modules for their appropriateness for ODL. The document analysis was carried out to triangulate the findings obtained through both quantitative and qualitative methods. Structured according to a set of criteria for objectivity, it was designed to serve the purpose and ensure alignment with the eight General Standards discussed under Section 5.4. The approach enabled me to disprove most of the statements which showed agreement and to confirm some of the defining variables of quality assurance.

CHAPTER 6: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The aim of this study was to evaluate the quality of DL materials used by selected HEI in Ethiopia. The previous five chapters discussed different but related phases of the study. Chapter 5 presented and analysed data collected from the respondents and documents. The findings generated through quantitative and qualitative methods were discussed following the themes aligned with the research questions. This current chapter presents a summary of the findings, conclusions and recommendations of the study that can be adopted by ODL institutions in Ethiopia to improve the quality of course materials they use. Finally, the chapter presents a model that can enhance the quality of ODL materials if properly implemented by the institutions.

6.2 SUMMARY OF THE STUDY

This section gives an overview of the whole study as discussed next.

Chapter 1 introduced the study by giving its context, orientation and background. It stated the research problem followed by the research questions and objectives of the study.

Chapter 2 explored a theoretical framework underpinning this study and reviewed literature on the development and practice of DE in Ethiopia.

Chapter 3 reviewed international and scholarly literature on the quality and characteristics of open and distance learning materials and presented the best practices from some ODL institutions, notably Unisa and IGNOU.

Chapter 4 reviewed some philosophies and paradigms that underpin social research and the approaches used. It gave the reasons for choosing mixed methods research, discussed the techniques used to validate the study and stated the ethical considerations followed.

Chapter 5 presented the data in a tabular form and analysed it in accordance with the t-test that was found to be relevant to answer the research questions. It also discussed the results obtained through a coherent analysis of quantitative and qualitative data that mainly referred to the CW and CC perceptions of the preparation, implementation and execution of identified aspects of ODL course development and the benefits obtained by students from the learning materials.

This sixth and final chapter presents a summary of the whole study and gives an overview of the literature reviewed as well as the theoretical framework that anchored the study.

This study aimed at evaluating the quality of ODL materials used by selected HEI in Ethiopia. It was motivated by my curiosity as I was a student and an expert in the field of DE. Through the works of Keegan (1995), COL (2000; 2005), UNESCO (2002), Moore and Anderson (2003) and others, I came to understand that self-learning materials in DE are people-oriented and call for creativity and innovation. I further realised that SIM requires the art and the science of crafting effective learning environments. From my experience as a senior course editor of DL modules and as an invited trainer for modular preparation on ODL at different government and private universities in Ethiopia, I realised that most print-based ODL modules, if not all, lacked the characteristics of SIM. This means that ODL was being administered without following the philosophy that underpins and guides this system. Through a critical analysis of literature and research findings, this study sought to propose a structure that ODL material should foster independent learning. All the inputs congregated in this study, the literature review, research methodology and design, collection and presentation of data, data analysis of data and discussion of findings were geared towards addressing the research questions. The next section presents a synopsis of literature review.

6.3 SUMMARY OF LITERATURE REVIEW

This study reviewed literature on the historical development of ODL in Africa and Ethiopia specifically, during the pre-independence and post-independence periods. It traced five generations of DE since its inception; course quality standards in DE; experiences of selected countries from Africa (South Africa [SA]), Europe (UK), Asia (China) and the USA, which were chosen for their expertise in DE. Some best practices from Unisa and IGNOU were discussed in detail. The literature also comprehensively explored different theories, notably Moore's theory of transactional distance and the constructivist theory of learning.

UNESCO (2002:22) defined DE as an educational process where all or most of the teaching is conducted by someone removed in space and/or time from the learner, where all or most of the communication between teachers and learners is through an artificial medium, either electronic or print. In this sense, the credibility of DE as a method no longer needs to be proved. The argument rests, however, on two issues: the quality of learning materials and the responsiveness of the system in providing feedback and individual help to students with regard to learning and study problems. Most DE institutions use print as a major part of their learning material and other

forms such as radio schools, educational television, telephone teaching, audio and video teleconferences and computer-mediated communication to support it (Gujjar & Malik, 2007:56). In this scenario, teaching requires the text/unit to be self-instructional in nature, and the students to be guided in their study of the other media by the main teaching texts (Lockwood, 1994:57). However, the basic issue is whether the teaching texts serve the purpose of telling or teaching or both. Teaching texts are concerned with telling in the sense of providing information about the basic subject matter of the course and they also serve the purpose of teaching by providing students with opportunities to develop a deeper understanding of the subject matter, to gain expertise, to practise appropriate skills and to apply what they have learned in different ways (Lockwood; 1994:57). Gujjar and Malik (2007:56) emphasised that the stimulus that print materials offer for learning depends primarily on the teaching skills which they incorporate, and on progressive mastery of the subject.

Literature in Section 2.7 highlighted that no matter how well organised materials are in terms of the use of modern technology, learners still rely on printed information. The question is: how suitable are textual materials for independent learning? As the theories chosen to underpin this study argue, ODL materials should be prepared in such a way that they promote interaction between the learner and the instructor by creating a virtual dialogue between them or reducing the transactional distance as advocated by Moore (1997:23) so that the former could construct knowledge by having active engagement with the learning environment (Teo & Biggs, 2005:4-5) (constructivism). Gujjar and Malik (2007:62) stressed that for learners to be able to comprehend the required teaching points, the text should use illustrations which help the writers to visualise the concepts so that learners can see that they support the text.

Self-learning materials are supposed to satisfy certain fundamental issues to make them useful (cf. 2.7). As discussed in the same section, once the draft study material has been developed, the whole course or unit should be rechecked for cumulative coherence on an iterative basis and revised before handing it over for printing and production.

The print-based ODL SIM should satisfy five characteristics required to exhibit quality: self-contained, self-directed, self-explanatory, self-motivating and self-evaluating (Chaudhary & Reddy, 2018:44-45). They are supposed to enable students to engage in meaningful learning on their own without the need for another individual to be teaching for understanding to occur (Barandika et al., 2013:1949) (cf. 3.4). Such materials should be user-friendly and developed in

such a way that they are easy to use and ensure that students understand the content and are able to achieve the desired learning outcomes independently.

6.4 SUMMARY OF THE FINDINGS

This study explored whether the ODL materials used by selected HEI for distance in Ethiopia satisfied the basic characteristics of SIM. The study applied questionnaires and document analysis that adapted the QM HE Rubric for this purpose. The summary of findings of the study presented here are structured according to the main research question and sub-questions.

6.4.1 Main Research Question

The basic research question that this study sought to address was: what is the quality of DL materials used by the selected universities in Ethiopia?

The findings related to the main research question are dependent upon the findings of the sub-questions. The discussions that are presented below (cf. 6.5.1.1 - 6.5.1.5) give detailed findings for each sub-question and are converged to address the main research question. The core finding, however, is that the learning materials used by selected universities/HEI did not satisfy four of the fundamental characteristics: self-directing, self-motivating, self-evaluating and self-containing. However, they fairly satisfied the characteristic of self-explaining. Hence, based on the findings, the learning materials used by the selected universities/HEI did not satisfy the characteristic of being self-instructional. This concluding remark is supported by the findings generated by the rubric adapted to evaluate the effectiveness/quality of the self-learning materials (cf. 6.4.4).

6.4.2 Sub-Questions

1. What characteristics of ODL do the materials of selected universities have?
2. Do the DL materials of selected universities meet the set criteria for ODL materials?
3. How do public and private DL institutions satisfy the definition and attributes of self-learning?
4. What type of ODL professional development do writers of DL materials receive?
5. How can the Ministry of Science and Higher Education and HEI devise mechanisms that assure the quality of SIM in ODL institutions?

6.4.3 Findings Related to Sub-Question 1

Chapter 2 discussed the crucial aspects that should be considered before developing SIM (cf. 2.7), while Chapter 3 focused on the characteristics of ODL materials (cf. 3.4). Five characteristics that define the quality of SIM: self-explanatory, self-contained, self-directing, self-motivating and self-evaluating were highlighted (cf. 3.4). The next section provides highlights of the research findings regarding the characteristics that the ODL materials should satisfy.

6.4.3.1 Students' understanding of the characteristics that ODL materials should satisfy

The first characteristic of learning materials is that they are self-contained, as expressed in the students' submissions. They understood that their ODL materials consisted of guidance and hints on different types of tasks included in the learning materials. Introductions of the courses, modules or units and statements of objectives seemed to serve them well and most students seemed to benefit from the white spaces left in their learning materials. Nearly half of them felt that the icons used in their learning materials were uniform throughout the course but almost all of them agreed that their learning materials did not inform them how long they should spend learning the modules. Most students in government institutions understood that their learning materials consisted of verbal signposts, but did not support them in critical reading, while the majority from private institutions disagreed with the statement. Regarding reference sources, many respondents from government and private institutions reported that they consulted dictionaries frequently to check some words used in their learning materials. Furthermore, almost all the student respondents knew about the availability of unit summaries in their learning materials (cf. Table 5.46) and most of them said that the unit summaries were helpful. However, nearly all student respondents found that their lessons were not supported by educational technology.

Regarding the self-explanatory characteristic, most respondents believed that the main bodies of the texts in the DL modules they used were logically sequenced. Slightly more respondents from government institutions held this view than those from the private respondents (cf. Table 5.20). Similarly, most student respondents from government and private institutions indicated that the language used in the learning materials was simple to read and understand (cf. Table 5.20). Moreover, most of them indicated that the examples included in their learning materials were adequate and relevant though they were not self-explanatory (cf. Table 5.43). Most respondents indicated that the diagrams/graphs included in their learning materials were relevant, adequate and carried explanatory references. However, a significant number indicated that they came

across graphs/diagrams that were irrelevant to the topic under discussion and had wrong explanatory references (cf. Table 5.44).

In relation to the self-directed characteristic, most students emphasised that they were advised to work on the IQ, SCE and activities included in the learning materials. However, the reflection of slightly more respondents from the private institutions registered a higher approval of this statement (cf. Table 5.20). They provided their opinions regarding the introductions and objectives that their learning materials should include. Most student respondents from both sectors indicated that the introductions of courses, modules or units (cf. Table 5.26) served their purpose well and they benefited from the statements of objectives (cf. Table 5.27). However, a large number of respondents felt that their learning materials did not provide white space for every type of task left in the course materials. Among those who came across white space, slightly more than half said they benefited from this (cf. Table 5.33).

Furthermore, another advance organiser that student respondents reflected on was the study time provided. Nearly three-quarters of them indicated that their learning materials did not inform them how long they should spend on learning the modules (cf. Table 5.66). However, a significant number of them differed and said that the learning materials informed them about the time they should spend on learning. The analysis of data from the document analysis revealed that the modules of only one private institution, RGCOVL, allocated study time for courses. Similarly, a large number of respondents said that even though the course was meant to be completed in one semester, they were not advised about how much time they should budget for every activity they were supposed to do (cf. Table 5.68). Moreover, most student respondents stated that their learning materials consisted of verbal signposts in their learning materials. However, in this study, no modular materials were found to have this access device inbuilt.

Concerning the fourth characteristic, self-motivation, students' responses were organised according to themes that described access devices beginning from the cover page and addressed important issues within the learning materials. Accordingly, a large number of respondents from private and government institutions confirmed that all their modules displayed necessary information clearly and fully on the cover pages (cf. Table 5.22). Similarly, most respondents stated that the typography and layout of their learning materials did not attract them to read (cf. Table 5.74). Regarding the user-friendliness of content presentation, the respondents from government institutions responded more favourably than those from private institutions (cf. Table 5.20). Moreover, most respondents from government and private institutions shared that the

colour, the binding (cf. Table 5.24), the margin and layout of the course materials (cf. Table 5.75) were not stimulating for reading. Furthermore, almost all the respondents (cf. Table 5.51) reported that they worked on assignments and submitted them to their respective institutions for grading. Most respondents indicated that they managed to work on the assignments by themselves while a significant number of them sought support from others to work on all questions included in the assignments (cf. Table 5.55). Despite the problems mentioned concerning assignments (cf. Table 5.58), nearly all the respondents seemed to have benefited from working on the assignments. However, regarding feedback given to their submitted assignments, most students said they did not get detailed individual feedback from their tutors. Finally, concerning specification of time for the tasks that an ODL student is supposed to complete, more than half of the student respondents said time was not specified for working on each activity of the assignment. Most respondents also stressed that examples were not provided to guide them how to work on the assignments (cf. Table 5.57).

The fifth and last characteristic that an ODL material should satisfy to become a SIM is self-evaluating. Students' responses covered access devices described as IQ, SCE, LA, unit summaries, feedback and post-tests. However, a very large number of student respondents commented that their learning materials did not consist of IQ (cf. Table 5.28). Only 38 respondents from RGCOVL (private) said the IQ were available and most of them managed to work on them (cf. Table 5.29). Most of the respondents who managed to work on the IQ said that they were not followed by suggested answers in the modules and were time-consuming, complicated and repetitive (cf. Table 5.30). Similarly, most respondents stated that the IQ did not help them to communicate with their instructors virtually (cf. Table 5.31).

Furthermore, a very large number of respondents suggested that their learning materials consisted of SCE at the end of each unit of study (cf. Table 5.39). They felt that SCE were structured to encourage extensive memorisation of subject matter (cf. Table 5.40). Similarly, though it is quite normal to provide instructions to students on how they could work on the questions, almost all the respondents stated that it was not specified how much time they should spend working on each question. Most students also reported that different types of questions were included in the SCE, namely, multiple-choice items, short answers and essay type questions (cf. Table 5.41). Moreover, most respondents answered that they attempted the SCE and were able to pass their final exams easily as they kept them actively engaged in their learning (cf. Table 5.42).

Another crucial access device that should be inbuilt in ODL materials are the LA. In this regard, most student respondents understood that the LA were provided in their learning materials immediately after covering a unit of study (cf. Table 5.34). Regarding their structure, the same number of respondents commented that the questions encouraged memorisation of content (cf. Table 5.36). Students were also requested to mention the benefits they obtained from working on LA. Many respondents said they were encouraged to persevere, and they seemed to benefit from the LA to pass their final examinations (cf. Table 5.38).

Access devices like post-tests help students to assess their progress in learning in each unit of a course and keep them focused on their studies. Concerning their availability and the services that students obtained from them, most respondents suggested that their learning materials did not include post-tests. A significant number of respondents from RGCOVL, however, replied that their learning materials contained post-tests (cf. Table 5.63). Additionally, among those student respondents who had worked on post-tests, a large number of them agreed that most of the post-tests were directly related to the objectives of a unit of study. Similarly, almost all the respondents who agreed that their learning materials consisted of self-checklists, confirmed that they attempted post-test questions prior to working on the SCE and LA, and said the post-tests served their intended purpose (cf. Table 5.65). Finally, most respondents who reflected on the availability of post-tests said that the post-tests did not indicate the time needed to complete them. In general, students who worked on the self-checklists seemed to benefit from them (cf. Table 5.64).

To emphasise the comprehensiveness of the self-evaluating quality of ODL materials, students' responses regarding the benefits of a unit summary were also addressed. Consequently, most students understood that the unit summaries served their purpose. They, however, also stated that unit summaries did not include inbuilt examples and did not support them to carry out checkups on their performance and to consider necessary adjustments (cf. Table 5.47).

Regarding the access devices and feedback that ODL materials should have to be referred to as SIM, most student respondents from both government and private institutions indicated that their learning materials included feedback, though a significant number from private institutions said they did not (cf. Table 5.20). However, almost all the respondents said the feedback provided in their learning materials was not accompanied by an explanation to show the students the logic behind the correct answers, and that the answers were only in the form of 'right or wrong' type (cf. Table 5.49).

Course writers and coordinators' understanding of ODL materials that satisfy the required characteristics

This sub-section highlights the main findings accentuated by the CW and CC from government and private institutions.

Regarding the self-explanatory nature of learning materials, compared to those in private institutions, the CW from government institutions believed that the ODL materials they prepared were easy to understand. However, referring to the types of examples included in the course materials, private institutions' CW managed to incorporate appropriate examples that maximised understanding of the lesson (cf. Table 5.99).

In relation to the self-directed nature of the course materials, it was found that all the private course writers included instructions for all tasks, and only three-quarters of the government CW did the same (cf. Table 5.90). Similarly, all government and private CW included learning objectives and introductions in the learning materials they prepared (cf. Table 5.90). Furthermore, private CW specified a time frame for each learning task provided in the modules more often than those from the government institutions (cf. Table 5.90).

Regarding the characteristic of self-motivation, almost all the government and private CW and CC indicated that the learning materials reflected new knowledge (cf. Table 5.98). Moreover, a large number of government CW understood that the learning materials they developed had the potential to meet the future needs of the students (cf. Table 5.98). Similarly, the CW and coordinators from both sectors said the courses would equip the students with better professional insight and skill. The question is, however, how these could be achieved while most government and private institutions' CW believed that the teaching materials they prepared were not properly presented (cf. 5.99).

Finally, pertaining to the characteristic of self-evaluating, nearly all the CW from the private institutions included IQ in the learning materials while only three-quarters of government CW managed to do so (cf. Table 5.90). Similarly, almost all the government and all private CW included SCE in the learning materials they prepared (cf. Table 5.90). Furthermore, almost all the private CW and most of the government institutions provided LA adequately in the course materials (cf. Table 5.99). Almost all the CW from both sectors said that they included the answers to the SCE and activities in the learning materials (cf. Table 5.90).

6.4.4 Findings Related to Sub-Question 2

Based on the analysis of selected distance course materials using the adapted comprehensive rubric, the following results were found from each institution (cf. Table 5.100). The standard minimum score to qualify for appropriateness for ODL (SIM) is 85.0%.

For the course materials at AAU, only one course for Financial Markets and Institutions was found to have access devices: course introduction, course objectives, unit introduction, unit objectives, SCE, a summary and a reminder. However, the same course did not include icons, course code, activities, feedback to SCE and activities and glossary. This course was found to satisfy 75% of the overall score, which was a bit below the accepted minimum. Moreover, the evaluation of four other courses at AAU showed that they were way below the minimum and that the Human Resource Management course fell short on the necessary advance organisers in that it satisfied only 44.8% of the overall score.

Regarding the course materials from KEU, it was found that only the structure of the module for English consisted of almost all the access devices, but did not include icons, visible diagrams and glossary. Its overall score of 80.1% was very close to the minimum. The remaining three courses: Basic English-II, Children with Special Needs and Inclusive Education in Pre-School were found to lack the access devices: icons, self-check lists, feedback to SCE and activities and glossaries. The course material, Basic English Language, however, omitted most of the required access devices (consisting of only activities, SCE, and unit summaries), leading to an overall score of 43.0%, the lowest score determined among the institutions.

As shown in Table 5.100, five of the courses of UU contained the course code, unit introduction, unit objectives, self-check exercises, activities, feedback to SCE and unit summary. They, however, fundamental advance organisers like icons, course introduction, course objectives, clear figures, self-check list and glossary were missing. Five of the courses received overall scores ranging between 60% and 70%.

An analysis of the course materials at RGCOVL showed that four of the course materials satisfied the required minimum as they contained 85.0% of the access devices and only fell short on providing diagrams and glossaries.

6.4.5 Findings Related to Sub-Question 3

The results generated under this sub-section are related to CW and CC understanding of why people choose to learn through ODL. Most CW and CC suggested that the system of open and distance learning gives space and enough time for learners to carry out their responsibilities and take care of their jobs while learning at the same time. Some respondents also said that the system enables distance learners to use their time more effectively than the face-to-face modality and creates access for disadvantaged students to pursue education even though they were far away from the institutions (cf. Table 5.79). Similarly, significantly more respondents from private institutions than government institutions commented that ODL is a convenient platform for self-learning since it enables learners to study at their own pace wherever they are (cf. Table 5.80).

Regarding the mode of learning to upgrade their educational levels, most respondents from private institutions preferred ODL for different reasons while the majority of respondents from government institutions preferred face-to-face (cf. Table 5.82).

The other issue that was addressed here is CW understanding in ensuring that the structure of the course materials was suited to self-learning. According to Yousuf et al. (2008: article # 6), self-learning materials should be prepared by coordinated efforts of writers, course development coordinators, reviewers, designers, and editors along with other members of a course development team. It is also my contention that if ODL materials are to serve the purposes of self-learning, they need to be prepared by a group of experts having different skills in material development.

Regarding the approach used for modular course materials preparation, while the majority of CW from government institutions had prepared the learning materials individually, the CW from private institutions had used both individual and course team approaches. Overall, the majority of CW from both institutions followed the individual approach in writing the learning materials (cf. Table 5.83).

Concerning the CW knowledge of preparing a course plan before writing ODL course materials, it emerged that most of them acknowledged that they formulated a plan of action before writing ODL materials. This is what is expected of a careful and effective CW, that is, to organise a flowchart of all activities from the preparation to execution stages in an ODL system (cf. Table 5.86). Similarly, most course writers from both institutions indicated that they prepared ODL course materials in a modular form (cf. Table 5.88). They highlighted the following points as the main reasons: modular materials motivate distance learners to keep reading as they present the

learning experience in an organised and interconnected manner; they enable distance learners to acquire the competencies intended by the institution by evaluating their success; and they promote the quality of training as they engage responsible learners in independent study by providing all the required supports that the learner needs using inbuilt access devices (cf. Table 5.89).

With respect to the inclusion of access devices/advance organisers in the ODL materials, it was established that the CW from both private and government institutions had a similar understanding of this. On the allocation of working time to each learning task, it emerged that while nearly all the CW of government institutions replied that they provided a timeframe (four fully and four partially), only four out of six CW from the private institutions did the same (cf. Table 5.90). Likewise, the CW from both types of institutions required their distance learners to consult books and contact professionals in their field of study for a better understanding of the courses.

It also emerged that the CW from private institutions had received more professional support from the editors than those from the government institutions (cf. Table 5.95). In general, the CW and CC from both streams had similar perceptions of the preparation aspects of course development.

6.4.6 Findings Related to Sub-Question 4

According to COL (2000:2), the authors who prepare ODL material should write in an engaging way, and actively involve learners as it is expected to read more like a tutorial than a lecture and create more opportunities for interaction. COL (2005:10) concurred that those who design instruction for post-school courses should consider the learners' prior knowledge and experience and the need for learners to follow their own pace of learning, set their own personal goals and check their progress (cf. 5.3.4). They should also give learners the maximum opportunity to put new knowledge and skills into practice. By contrast, it was determined that none of the CW and CC had a degree in DE (cf. Table 5.77). Similarly, it was found that the same percentage (66.6%) of CW and all the CC from both sectors attended training given by the institutions for which they wrote courses (cf. Table 5.77). While many of the CW from government institutions attended the conferences for awareness creation about ODL, only one from the private institution did this (Table 5.77).

On the adequacy of training provided, the CW from both sectors indicated that it was adequate; however, those from private institutions obtained better training than those in government

institutions. Most of the CW from private institutions acknowledged that their trainers had adequate knowledge and skills.

Furthermore, the analysis revealed that the majority of the CW and CC had read relevant materials for the purpose of course development and coordination (cf. Table 5.77). Similarly, more than half of the respondents from private institutions said the time given to CW to prepare ODL materials was adequate, while less than half of the respondents from government institutions expressed this view (Table 5.78). In general, all the CW and CC who participated in the development of course materials seemed to have knowledge about the ODL system. They came to know about it through different platforms, namely attending training and conferences, reading and being staff of the university (cf. Table 5.76).

6.5 CONCLUSIONS OF THE STUDY

In Section 6.4, the findings of the study were presented, and in this section, the conclusions are drawn against the sub-questions. Where appropriate, these have been triangulated with the results obtained from a standard measuring rubric that was used to analyse DL modules.

6.5.1 Regarding the Self-Instructional Nature of the Course Materials

6.5.1.1 Regarding the self-contained characteristic

Though a large number of CW and CC recognised that the modular materials they prepared met the parameters that would qualify them to be self-contained, as seen from the users' point of view, the course materials did not specify the time that the learner should budget for learning the course materials. Additionally, learners were forced to consult dictionaries frequently to clarify concepts and certain words. Though certain structures were included, referring to the access devices that most students stated were not available in their learning materials, like icons, technology that could support their lessons, besides those shortcomings mentioned above, the course materials, thus, seemed to omit the core structures and were not self-contained.

6.5.1.2 Regarding the self-explanatory characteristic

Most course writers and coordinators perceived the course materials they prepared as easy to understand because they incorporated appropriate examples in them. Most students were comfortable with the logical sequence of texts and with the adequacy of examples incorporated in their learning materials; however, they complained about the self-explanatory nature of

examples. Though the English language used to convey the required information seemed to be simple for most students to comprehend the lessons, a significant number of them found it difficult to grasp the content of the courses. Similarly, though most respondents believed that they used relevant and adequate diagrams with explanatory references, a significant number of students complained about the locations and interpretations given to some of the diagrams incorporated in their learning materials. Based on the responses of most CW coordinators and students, the course materials seem to be relatively self-explanatory.

6.5.1.3 Regarding the self-directed characteristic

Nearly all the CW stated that they provided instructions to direct learners on how to carry out different tasks in their learning materials and incorporated introductions and learning objectives for the course, module and unit of study. However, a significant number of CW did not mention how long a learner should spend on each task provided in the course materials. The student respondents seemed to benefit from the hints and guidance incorporated into their learning materials. Similarly, the introductions and statements of objectives of the course, modules and units of study served most students adequately. However, a significant number of student respondents complained about insufficient guidance they obtained from the introductions and statement of objectives. Most of them said their learning materials did not provide white space to practise tasks given in the course materials. Moreover, the respondents said their learning materials did not specify the time needed to guide their work on each piece of activity of the course. The responses of CW and students revealed that the course materials lacked the necessary parameters to define them as self-directed.

6.5.1.4 Regarding the self-motivating characteristic

Most CW and CC from both streams (government and private) believed that the DL materials they prepared exhibited self-instructional properties which reflected new knowledge, had the potential to meet the future needs of students, and could equip the latter with better professional insight and skills. A large number of CW and CC from both sectors explained that learning materials had insufficient examples related to the everyday lives of learners. As such, the materials were deemed not to be attractive to learners.

The student respondents from both government and private institutions reported that their learning materials had necessary, clear and full information on the cover pages. However, they complained about the unstimulating nature of the colour, binding, margin and layout of texts of the course

materials which distracted the attention of most respondents from studying. The government respondents seemed to be affected by the unexciting colour and binding of learning materials. The respondents from both sectors stated that the feedback was not encouraging and helpful to assess their learning progress. However, most students from government institutions enjoyed the friendly manner of content presentation compared to the respondents from private schools. Though most respondents managed to work on the assignments by themselves, a considerable number of students sought support from others to work on questions included in the assignments. They mentioned a shortage of time, the vagueness of questions and the absence of examples to guide them to work on the assignments as the main challenges. Most respondents highlighted the unavailability of helpful feedback to their attempts as a challenge. Moreover, most respondents from both government and private institutions stressed that they were not guided on the time they should spend on each activity of the assignment. Finally, most respondents also indicated that the typography and layout of their learning materials were not attractive to read through attentively. As such, the learning materials lacked stimulating power in aspects such as colour, binding, provision of feedback, specification of time for different activities, and their typography and layout. Hence, it is concluded that the materials were not designed in a way that is self-motivating.

6.5.1.5 Regarding the self-evaluating characteristic

Almost all the CW from both government and private institutions believed that the learning materials they prepared included IQ, SCE, LA and answers adequately.

Most students from both government and private institutions indicated that their learning materials consisted of feedback but lacked IQ. The LA were provided at the end of a unit of study though the nature of the questions encouraged memorisation of content. Moreover, although the instructions were given in the learning materials, no time limit was specified for each task. Most students believed that they benefited from working on LA as the learners were motivated to keep studying and challenging themselves to pass their final examinations. Similarly, most students acknowledged the availability of SCE located at the end of a unit of study designed to encourage memorisation of content. In this regard, no time was specified for working on each of the SCE. The types of questions were largely multiple-choice items, short answers and a few essay questions. Most students indicated that they worked on the SCE and enabled them to pass the final examinations. Most students indicated that the feedback included in their learning materials was in the form of 'right' or 'wrong' answers with no explanation given for incorrect answers.

Moreover, most student respondents confirmed that their learning materials did not consist of self-checklists/post-tests. However, the respondents from RGCOVL confirmed the availability of these access devices. Students who worked on self-checklists seemed to benefit from them though no specific time was identified to work on them. Most respondents agreed with the CW about the availability of the SCE and LA; however, they did not find the IQ in their learning materials. Moreover, the types of question items in SCE and LA promoted rote memorisation. No time was provided to evaluate the pace of learning and the feedback was not helpful as it did not encourage interaction with their instructors. With all these drawbacks, it can be concluded that the learning materials failed to satisfy the characteristic – self-evaluating.

The discussion from Section 6.5.1.1 – 6.5.1.5 shows that the learning materials used by the selected institutions did not satisfy four of the fundamental characteristics. However, the characteristic of self-explaining was reasonably satisfied. Hence, based on this finding, it can be concluded that the learning materials used by the institutions selected for this study did not satisfy the characteristic of self-instructional. This is supported by the findings generated using the adapted rubric to evaluate the effectiveness/quality of the self-learning materials (cf. 6.4.4) and to triangulate the results from the questionnaires. Except for the modules of RGCOVL, the DL modules of the remaining three institutions (two government and one private) did not meet the minimum standard. Thus, it is concluded that except for one private institution, three of the institutions did not develop course materials that could serve ODL. The ODL course materials of an institution that solely reaches the distance learner via textual materials should be self-instructional.

6.5.2 Meeting the Criteria Set for ODL Materials

Except for the modules of one private institution (RGCOVL), the modules of the other three participating institutions did not meet the adapted QM review expectations to be regarded as effective for self-learning. This implies that the underrated institutions had not been following the principles of ODL. Similarly, as an institution, RGCOVL only satisfied the minimum requirements.

6.5.3 Comparison of How Government and Private DL Institutions Satisfied the Definition of Self-learning

The CW and CC from private institutions described ODL as a convenient platform for self-learning more than those from government institutions. Comparatively, more respondents from private institutions preferred the ODL mode while the majority from government institutions chose the

conventional mode to upgrade their educational levels. Similarly, the majority of CW from government institutions believed that the preparation of modular materials could be effective if written individually. However, among the respondents from private institutions, there was mixed understanding on this issue. Overall, most CW from both sectors appreciated the individual approach used in course preparation, contrary to the experience accepted internationally.

Though almost all the CW from both sectors acknowledged the development of a plan of action (a structure that guides the flow of activities from preparation to execution stages) before writing ODL materials, those from private institutions recognised its necessity fully while some CW from government institutions rejected this. No difference was observed in the preparation of ODL materials in a modular form, and many CW from both sectors appreciated the approach used. Regarding the inclusion of access devices in the learning materials, almost all the CW from both sectors believed they had inbuilt devices. Moreover, there was little difference observed between the two types of institutions in the allocation of working time to each learning task provided in the modules. Similarly, the CW from government and private institutions required their distance learners to consult books and seek support from professionals for clarity on the content of the learning materials.

Furthermore, concerning the support obtained from professional editors, the CW from private institutions seemed to be in a better position compared to the government CW. In general, private institutions had better clarity and definition of self-learning, starting from their attitudes towards ODL, the approaches used in developing ODL materials, developing a plan of action for all intended activities, incorporating access devices and getting support from professional editors for the courses they prepared. Government institutions were good at including time frames for each activity provided in the learning materials. Both types of institutions require their learners to seek support in their learning materials.

6.5.4 The Type of ODL Professional Development the Course Writers of the DL Materials Took

It was also observed that none of the CW and CC had a degree in ODL. However, many of them from both types of institutions indicated that they had attended sensitisation training and conferences provided by their respective institutions on ODL materials development. Concerning the adequacy of training received, more CW and CC from the private sector than those from government institutions indicated that their trainers had the appropriate capability. Similarly, many CW and CC obtained knowledge on ODL, especially on course development and coordination by

reading relevant materials. The CW from private institutions were given adequate time for the preparation of the course materials compared to those in government institutions. Finally, it was found that all the CW and CC from both sectors acquired knowledge of ODL through different mechanisms. However, the CW and CC from the private sector seemed to have slightly better professional skills than their government counterparts. Scholars who are supposed to prepare ODL materials should get appropriate training on designing course materials for ODL students. This begins from acquiring a better understanding of the system of ODL.

6.6 RECOMMENDATIONS

So far, this chapter has given a summary of the study, a synopsis of the literature reviewed to shape this research, and the core findings and conclusions based on the findings generated. The next section presents the recommendations that can address the problems identified in the findings.

According to Maphosa et al. (2019: 196), ODL should be provided in the form of SIM. These course materials are vital in SDL and enable students to learn on their own without the instructor and being far away from the institution. Constancio et al. (2018:2) concurred that self-instructional courses consist of an intrinsic characteristic that determines the organisation of a series of didactic activities for self-directed study. This means that the structure of a SIM should present and make available the content to be studied and, at the end of each unit, tests to be attempted to enable the learner to verify if the learning objectives were met.

The recommendations presented below are based on the literature review and the findings from the empirical data analysed in Chapter 5 (cf. 6.1–6.5). Some pertinent suggestions made by the students, CW and CC have been added to the recommendations. These could enable the HEI engaged in the ODL system to develop SIM and inform the Ministry of Science and Higher Education and the Ethiopian Training Authority (MoE and ETA/HERQA) about alternative approaches to follow in developing ODL materials and implementing them. They can also guide different stakeholders on how to evaluate the course materials using a standard quality measuring rubric as indicated below.

6.6.1 Recommendations to MoE and ETA/HERQA:

In this section, recommendations that may enable the government bodies to devise a mechanism to take the maximum advantage of the system of ODL are highlighted.

6.6.1.1 Opening up ODL as a professional career

It is recommended that the ETA/HERQA should train ODL practitioners in the field of ODE to develop capacity in this area and leverage it as a professional career. HEI, in collaboration with Ministry of Education (MOE) could introduce a postgraduate diploma in ODL (in selected institutions). In this way, the whole system could be managed by knowledgeable experts. This could be reviewed and the ODL programme upgraded after some time. This could attract scholars (ODL lecturers) to the system and empower them to ensure that ODL institutions offer quality education.

6.6.1.2 Creating an organ responsible for the operation of ODL

The findings indicate that the institutions working in the ODL system do not serve disadvantaged students uniformly although the degrees they receive from the institutions have an equal status. To avoid such hidden parity (could not be seen on their degrees), the MOSHE and ETA should create an organ consisting of experts in the field of ODL which could be responsible for the operation of ODL. The organ should follow up the preparations of ODL institutions starting with their planning phase through the implementing and executing phases.

6.6.1.3 Endorsing the criteria acknowledged by ICDE

The statements included in the Quality Matter review rubric have a worldwide dimension (they are endorsed by ICDE) as far as Open and Distance Education is concerned, and with some modification, they can serve and enable Ethiopian HEI engaged in ODL to evaluate the quality of their course materials. The statements which are included in the rubric adhere to the issues to be considered for evaluation purposes.

6.6.2 Recommendations to the Institutions

6.6.2.1 Preparing self-instructional materials

As discussed in the conclusions, except for one private institution, the learning materials used by the institutions selected for this study did not satisfy the minimum requirement to be characterised as self-instructional. However, they operate with licenses from the concerned offices to run ODE. It is, therefore, recommended that HEI planning to engage in ODL using mostly print materials should make sure that the course materials satisfy all five intrinsic characteristics mentioned in Sections 6.5.1.1–6.5.1.5 to promote self-learning.

Seeking professional development of Course Writers and Course Coordinators

ODL courses are mostly based on learning materials that should be prepared before students start to study, and as such, almost every detail of the course needs to be planned before the course starts (COL, 2005:35). Therefore, the CW and CC should have sufficient knowledge of the learners' profiles, the conditions under which they study, the aims and objectives of the courses, the analysis of the content and how it is planned, the order of the content, how courses are paced, specifications of the course, the course guide and other relevant devices. All these aspects of planning for the development of ODL materials require CW and CC to have appropriate professional skills. Therefore, it is vital that the attitudes of those invited to prepare ODL materials should be considered (cf. 6.5.3) as they play a significant role in the application of the principles of ODL while writing the course materials.

Establishment of a professional association

According to Moyo and Renard (2016:1), a professional association (PA) is a professional organisation or a professional society that consists of individuals who meet certain professional requirements. Its purpose is to facilitate and support the achievement of crucial objectives of an organisation. PA is formed to provide services and enhance the careers of the professional members. Moyo and Renard further argued that a successful PA is expected to perform its functions effectively; to strive to give a common vision and goal to the profession; to aggregate efforts, thoughts and ideas of members; to serve as a voice to the profession, and to give power and credibility to the profession. Thus, it is critical that MoE and ETA/HERQA encourage ODL professionals and the institutions running ODL programmes to establish an association so that they can share concerns and experiences regarding ODL. The suggested name is 'Association of Practitioners in Open and Distance Learning of Ethiopia (APODLE)'. Similarly, ODL professionals should create a forum where they can discuss and concretise the goals/objectives of the association. Once the association is registered by the Agency for Civil Society Organisations of Federal Democratic Republic of Ethiopia, it can function with a governing document and be able to address those responsibilities mentioned above by Moyo and Renard. Moreover, the association should hold awareness creation conferences regarding the theories of ODL, the phases that ODL has gone through and its current status; revisit the field based on the indigenous experiences of the country and the continent; conduct research on how the field has developed of and create collaboration with other professional associations to share best practices.

In so doing, it can maximise the acceptance of the field both by the people and scholars of the conventional institutions who have a biased understanding of the field.

6.7 A MODEL FOR ADDRESSING QUALIFIED SELF-INSTRUCTIONAL MATERIALS

Based on Moore's theory of transactional distance and the constructivist theory of learning, which underpinned this study and the empirical findings, a model has been developed to be used as a guide for the development of SIM for open and distance learners (see Figure 6.1).

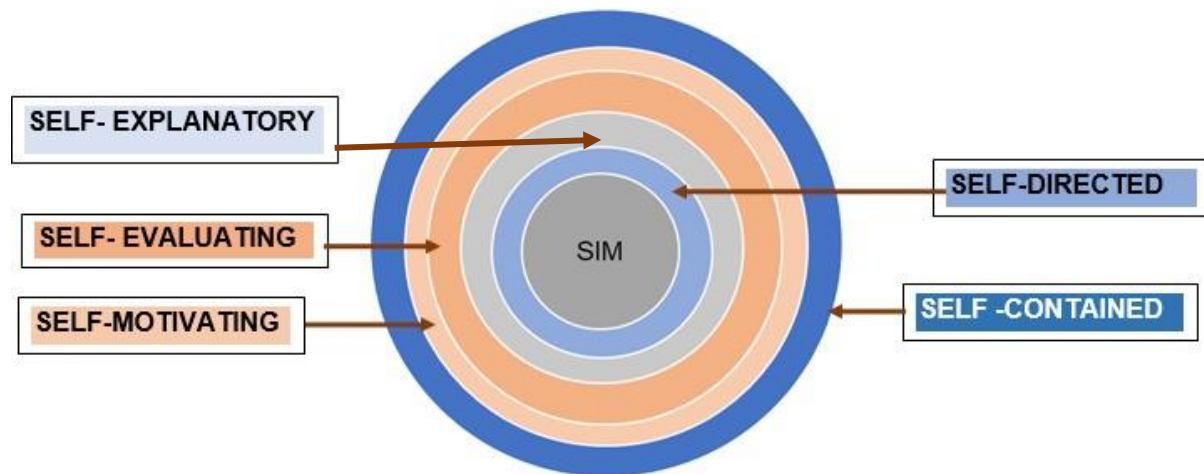


Figure 6.1: A Model for Developing SIM

The model emphasises three aspects involved in the development of ODL course materials: preparation, implementation, and execution (cf. 5.3.7), which should receive maximum attention so that it can serve its intended purposes. As the course materials are developed before students study the courses and are meant to be self-learning, every detail of the course needs to be planned before the course starts.

When the above preliminary experiences are managed properly, the model assumes that the characteristics of self-instructional materials can be contained in an ideal circular structure to represent the attributes that should be addressed by each of them and extend in a way that provides a foundation for the inclusion of the next characteristic. As explained in Section 3.4, self-directed course material provides introductions to the learner at appropriate places to enable them to create a linkage with their previous knowledge, inform them about the content they are going to learn, the study skills that the learner is required to use to comprehend the content and the skills they are expected to develop while learning.

Self-directed course material should be understandable to learners so that they can carry out all the tasks provided in the course material. As such, it is important that the concepts in the course material should have intellectual clarity and linguistic simplicity, and use concrete illustrations, diagrams and pictures together with their explanations, and embrace the self-explanatory characteristic. In this sense, the course material is considered self-directed and self-explanatory if it informs the learner about the availability of self-check exercises, post-tests and learning activities and directs them to actively engage with them and monitor their learning progress in the feedback (provided in the form of 'right or wrong' type, and full clarifications). In this way, it can be regarded as satisfying the third characteristic, self-evaluating.

The course materials that exhibit the attributes of being self-directed, self-explanatory and self-evaluating contain most of the structures that can motivate the learner to learn. Moreover, the qualities like arousing the curiosity of learners to search for new knowledge, to raise problems in relating their previous knowledge to familiar situations, the design, size, colour, typography and layout of the course materials should not impede the learners' interest to keep reading. Hence, they are regarded to be self-motivating. The course material should contain hints, guidance, directions, instructions, and complete coverage of content (self-directed); address what the learner is required to perform in simple, easy and clear language; provide illustrations to pictorial representations (self-explanatory); and provide exercises and activities to evaluate the learner's degree of understanding of the content (self-evaluating). All these features are meant to motivate learners to keep learning through their course materials (self-motivating). For an independent learner, the course materials are expected to replace the roles played by an instructor of a conventional institution, and the content of the course should be self-sufficient to save the learner's time in searching for additional source. Blending all four characteristics (self-directing, self-explanatory, self-evaluating and self-motivating) would mean that the course materials would be self-contained. An open and distance teaching institution should ensure that the elements discussed above are included for the course material to be characterised as self-instructional.

6.8 CONTRIBUTIONS OF THE STUDY

As explained in Chapter 1, this study sought to evaluate the quality of ODL materials at selected universities in Ethiopia through a mixed methods approach. The study has also proposed some strategies that could foster the development of ODL course materials produced by HEI teaching via the ODE system. Relevant literature was reviewed, and Moore's theory of transactional distance and the constructivist theory of learning were explored to anchor the study. The study

also discussed how ODL materials could be developed giving attention to the characteristics of SIM, and perceptions of DL, CW and CC towards the development of ODL course materials. As discussed in Section 6.6, some recommendations have been proposed for government offices and institutions involved in ODL on how to improve the system. If the recommendations were to be properly implemented, they could make a positive impact on course development in ODL institutions since they have both theoretical (knowledge) and practical (transaction) advantages. They could contribute a strong knowledge base to academics, researchers and scholars interested in the ODL system, especially in the medium of instruction, and linking it to theories of learning. To the MoE and ETA/HERQA, it would contribute to practicality in enabling them to provide the proposed model and the adapted comprehensive rubric which will help to manage the development of appropriate SIM at same standard across the institutions. It is also believed that those coordinating the development of ODL course materials would benefit from the model and the rubric that might help them to create their own strategies that can guide them in the preparation, implementation and execution aspects of the development of ODL course materials.

Finally, the findings and recommendations of this study contribute knowledge to the scientific community on the development of course materials for ODL using different platforms and stimulate further research on the subject.

6.9 SUGGESTIONS FOR FURTHER RESEARCH

As the summary of empirical findings shows (cf. 6.4), the research questions were answered, and the objectives of this study (cf. 1.4) were attained. However, some limitations such as insufficient time, a narrow scope and limited budget restricted the academic value of this study. As such, some self-learning attributes of ODL materials could not be addressed sufficiently. Therefore, the following topics are suggested for further investigation.

1. Research should be conducted on how the CW, mostly from conventional institutions, use theories of learning to guide the development of ODL materials.
2. The current study could be extended by including a larger number of private and government HEI that teach through the ODL or a dual mode as this might yield more research insights and findings.
3. Self-learning materials are described as “Tutorial-in-Print”. Research should be conducted to investigate the experiences of tutors on their interaction with distance learners. This

might disclose certain characteristics which require the revisiting of the structure of ODL materials for better use.

4. A study could be conducted on how government-run institutions can be established and administered to train academics or individuals to qualify with ODL expertise.
5. A detailed study should be carried out on the attitudes of instructors and coordinators who attended conventional HEI and recruited into DE institutions towards ODL.
6. A study should be carried out on the best practices in relation to material development from other DE universities in Africa and other countries and how these could be used to improve the ODL system in Ethiopia and other countries. Such good practices could be used to develop standard guidelines to be adopted by the ODL institutions in Ethiopia.

6.10 CONCLUSION

As the findings of this study show, except for one private institution, three institutions did not properly develop course materials that can serve distance learners, which should ideally be self-instructional. The main factors contributing to the incompetency of the course writers were found to be their feeble attitudes towards open and distance learning and insufficient professional skills they acquired while developing the course materials. This trend was found to be almost the same across the remaining distance education institutions. Regarding the expected skills of course writers, Rahman (2006:59) explained:

Writing is an art and writing for open and distance learning is even more difficult because you need to use certain styles and techniques that are so different from traditional writing. In designing and developing distance learning course materials, we have to ensure that writers are aware of learning theories and techniques.

The aim of this study was to evaluate the quality of distance learning materials used by selected universities in Ethiopia against the criteria accepted by International Council for Open and Distance Education and adopted by leading open and distance learning universities to devise a model that can improve the development of self-instructional materials. The study adopted a mixed methods research design where the quantitative and qualitative approaches were used concurrently, and the results generated using the quantitative approaches were triangulated using a standard rubric to crosscheck their trustworthiness.

Open and distance learners should be provided with learning materials that encourage them to be responsible for their learning, facilitated by the interaction between the learner, instructor, tutor and the institution. All these transactions keep the learner motivated and engaged and they are fundamental constructs of Moore's theory of transactional distance and the constructivist theory of learning. If higher education institutions already engaged in open and distance learning and those planning to do so could adopt both theories and address quality issues and benchmark their course materials against the standard rubric, they would benefit significantly and be in a better position to create excellent open and distance learning course materials.

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APPENDICES

APPENDIX A: ETHICAL CLEARANCE CERTIFICATE



UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2021/05/12

Ref: 2021/05/12/67143970/29/AM

Dear Mr AM TESSEMA

Name: Mr AM TESSEMA

Student No.: 67143970

Decision: Ethics Approval from
2021/05/12 to 2026/05/12

Researcher(s): Name: Mr AM TESSEMA
E-mail address: 67143970@mylife.unisa.ac.za
Telephone: +251911403842

Supervisor(s): Name: Prof M LEKHETHO
E-mail address: lekhem@unisa.ac.za
Telephone: +27797448090

Title of research:

Evaluating the Quality of Distance Learning Materials in Selected Universities of Ethiopia

Qualification: PhD ODL

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2021/05/12 to 2026/05/12.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2021/05/12 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.



University of South Africa
Pretorius Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
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APPENDIX B: LETTER FROM UNISA TO UNIVERSITIES REQUESTING PERMISSION TO CONDUCT THE STUDY



08 SEPTEMBER, 2019

UNISA-ET/KA/ST/29/06-09-19

TO WHOM IT MAY CONCERN

Dear Madam/Sir,

The University of South Africa (UNISA) extends warm greetings. By this letter, we want to certify that Mr. Aderajew Mihret Tessema (student number 67143970) is a PhD student in the College of Education at UNISA. Currently, he is registered for the proposal level of the doctoral study and for him to finalize his proposal; he needs some preliminary data from your esteemed institution. This is therefore to kindly request your cooperation to assist the student.

Kind regards,

Dr. Tsige GebreMeskel Aberra

Director – UNISA Ethiopia Centre

UNISA REGIONAL LEARNING CENTRE	
PO BOX 13836 ADDIS ABABA ETHIOPIA	
TEL	+251-114-350141
	+251-114-350078
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University of South Africa
Regional Learning Center
P.O. Box: 13836, Addis Ababa, Ethiopia
Telephone: +251 11 435 2244 / +251 11 435 0078

APPENDIX C: SIGNED PERMISSION TO CONDUCT STUDY (4 LETTERS)

II.1 Addis Ababa University





24 May, 2021

UNISA-ET/KA/ST/29/24-05-2021

Kotebe Metropolitan University
Addis Ababa

Dear Madam/Sir,

*To: All concerned
Please provide
required data.*

[Signature]
25/05/21

The University of South Africa (UNISA) extends warm greetings to you and the staff members of your esteemed University. By this letter, we want to certify that Mr. Aderajew Mihret Tassema (student number 67143970) is a PhD student in the Department of Educational Leadership and Management at UNISA. Currently, he is about to go out for data collection on his doctoral research entitled "*The Quality of Distance Learning Materials in Selected Universities of Ethiopia.*"

This is therefore to kindly request your cooperation to allow the student to access data sources from your university. We would like to thank you in advance for all the assistance that you would provide to the student.

Sincerely

Dr. Tsige GebreMeskel Abera
Director

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III.3 Unity University



Dr. Botte

24 May, 2021

UNISA-ET/KA/ST/29/24-05-2021

Unity University
Addis Ababa

Approved

Dear Madam/Sir,

The University of South Africa (UNISA) extends warm greetings to you and the staff members of your esteemed University. By this letter, we want to certify that Mr. Aderajew Mihret Tessema (student number 67143970) is a PhD student in the Department of Educational Leadership and Management at UNISA. Currently, he is about to go out for data collection on his doctoral research entitled *"The Quality of Distance Learning Materials in Selected Universities of Ethiopia."*

This is therefore to kindly request your cooperation to allow the student to access data sources from your university. We would like to thank you in advance for all the assistance that you would provide to the student.

Sincerely,

[Signature]

Dr. Tsige GebreMeskel Aberra
Director

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For your support
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RECEIVED
25 MAY 2021
UNITY UNIVERSITY

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II.4 Renaissance Global College of Open and Virtual Learning

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Renaissance Global
College of Open & Virtual Learning

Ref. No.: REGOVLE/0141/2013

Date: May 18, 2021

To: University of South Africa
College of Education
Preforia, South Africa

Subject: Letter of Consent

Accredited for
Bachelor Degree in:

- Logistics and Supply Chain Management;
- Accounting & Finance;
- Marketing Management;
- Business Management;
- Educational Planning & Management; and
- Agribusiness & Value Chain Management.

Mr. Aderajew Mihret Tssesma requested us to write him a letter of consent to your esteemed university referring all the necessary information to be in the content of the consent.

Renaissance Global College of Open & Virtual Learning is happy in explaining its willingness to the University of South Africa/ School of Education, assuring that Mr. Aderajew Mihret will be provided all the required data important to carry out the study for his PhD in the field of Open and Distance Learning. We believe the study will bring fundamental directions in the management of Distance and Open Learning in Ethiopia.

If you have any concern you can reach us through the address indicated on this letter of consent.



With best regards,

(Signature)
Aysaw Ateochew (Ateochew)
General Manager

CC:
College Admin and Finance Office
REGOVLE
Mr. Aderajew Mihret Tssesma
University of South Africa, Ethiopia Branch
Addis Ababa, Ethiopia

011-6-680855/0930-056744/0930-022287/0930-031446

P.O.Box 4/1080

email: regovle2012@gmail.com

ገንዘብ ሰነድ ለማግኘት
የደንበኞች ገቢ ማግኘት

Ethiopian Origin.
Global Destination!

APPENDIX D: CONSENT LETTER TO RESPONDENTS



RESEARCHER: TESSEMA, ADERAJEW MIHRET

I am a licensed trainer of CPD (Continuous Professional Development) for higher education instructors and an educational expert in Distance Education studying for PhD on the topic: The quality of open and distance learning materials used in selected universities/colleges of Ethiopia having **Professor Mapheleba Lekhetho** as his supervisor. It is assumed that the study will contribute to the body of knowledge, especially in the training of course writers for both print and online materials and help in training coordinators on how to support ODL learners.

I received a certificate with a reference number: 2021/05/12/67143970/29/AM for ethical clearance from UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE to conduct the study. I understand that identifying my needs might cause some anxiety and/or fatigue. I realize that answering questions in the questionnaire will take approximately an hour of my time and requires me to return the questionnaire to the researcher through the program coordinator as soon as possible for safe keeping.

I know that my participation is strictly voluntary, and I have the right to withdraw at any time and that my care and relationship with the researcher will not be affected. If I have questions that I need to be clear on, I know I can reach the researcher using the following addresses: **Telephone:** +251118691855 (Home) or +251118691829 (Office) or +251911403842 (Cell-1) +251911997401(Cell-2): and **P.O Box:** 28558/1000. I received an invitation to participate in this study and received a copy of this consent form having been explained the purpose of the study. I was assured that my identity will not be revealed while the study is being conducted or when the study is published (that my privacy and confidentiality are secured) and that this consent form is collected separately and the questionnaire I am supposed to complete is not paired with my name or student number. I fully understand the content of this consent form and hereby acknowledge with my signature.

PARTICIPANT'S SIGNATURE DATE

RESEARCHER'S SIGNATURE DATE

APPENDIX E: QUESTIONNAIRE FOR STUDENT RESPONDENTS



EVALUATING THE QUALITY OF THE DISTANCE LEARNING MATERIALS IN SELECTED UNIVERSITIES IN ETHIOPIA, FEBRUARY 2021

STUDENT QUESTIONNAIRE

INSTRUCTIONS TO THE STUDENT

Thank you for taking time to complete this questionnaire. The questionnaire consists of three parts i.e., Part-I, Part-II, and Part-III which you are required to complete fully. Part-III consists of items from A – Q. All the senior students (non-first years) who have been studying at one of the institutions mentioned below qualify to complete this questionnaire.

Addis Ababa University & Kotebe Metropolitan University (Government Institutions) and Unity University & Renaissance Global College of Distance & Virtual Learning (Private Institutions)

1. You should first sign the consent letter from your regional coordinator before completing this questionnaire.
2. You must not complete more than one questionnaire.
3. Completed questionnaire should be returned to the regional coordinator without delay.
5. No need to write your name and student number on this questionnaire and the information you provide us will be used only for research purpose.

MAIN OBJECTIVES OF THE RESEARCH:

1. To know the perspectives of students of the Higher Education Institutions on the Self-Instructional nature of the ODL (Open and Distance Learning) materials they have been using in their studies.
2. To recommend ways of improving the quality of the ODL course materials to the responsible bodies (Ministry of Education & Higher Education Relevance and Quality Assurance) if the study shows something for change.

NB: The abbreviations in the tables represent as follows:

SA = Strongly Agree A= Agree SDA =Strongly Disagree DA = Disagree Dear our respected student,

Please provide us answers to the following questions (print a “✓” mark in the boxes) based on your perception and understanding. Your objective response is required.

PART- I: PERSONAL DATA

1. Your gender:

Male	
Female	

2. Your age range:

20 or younger	
21 – 30 years	
31 – 40 years	
41 – 50 years	
Above 50 years	

3. Marital status:

Married	
Single	
Divorced/Separated	

4. Your proficiency in the English language (reading and comprehension):

Excellent	
Very good	
Good	
Fair	

5. Did you pursue any higher level of learning other than you are currently engaged in?

Yes	
No	

6. If your response for Q. 5 is 'yes', please specify your highest educational level.

7. Do you have a job?

Yes	
No	

8. If your answer for Q. 7 is 'yes', please indicate your employment status:

Self-used	
Government employee	

Private employee	
------------------	--

9. How long do you work?

8 hours from Monday-Friday	
8 hours from Monday-Friday and half day on Saturday	
8 hours from Monday-Saturday	
Other (please specify)	

10. What year are you currently attending your learning?

2 nd year	
3 rd year	
4 th year	

11. Your reasons for learning through the system of open and distance education.

As it gives me a chance for learning while securing at job.	
As it allows me to use my own time and pace for learning.	
As I could not find the course in the daytime program.	
As an adult person, I am afraid that I cannot compete the young regular students.	
As I could not satisfy the minimum cut point required to join the daytime program.	
As I am a physically impaired person and unable to attend daytime classes.	
As it is the best option from economic point of view.	
As it provides me a chance to challenge my responsibility and capacity to learn.	

12. Which higher education institution are you currently attending for your degree from?

Addis Ababa University	
Kotebe Metropolitan University	
Unity University	
Renaissance Global College of Distance Education and Virtual Learning	

13. How have you been receiving your learning materials?

Through postal service	
Collecting in person	
Through emails	
Through agents	

PART-II. DATA ON THE APPROACH MAINTAINED BY THE COURSE MODULES

1. Among the management courses you have taken, did you find a course or courses difficult to understand and some other easier?
2. If you found some of the courses difficult to understand, what do you think made them so?

Language used	
The scope being higher	

Lack of motivation	
Lack of sufficient examples	
Content packages were voluminous and frightening to start reading from	
They always require me to look for some support from extra sources	

3. If you found courses which were easier to understand, what do you think made them easier to understand?

Clear usage of language	
Systematic presentation of the content	
Exercises, together with their answers, were richly provided	
They considered my previous knowledge or experience in learning	

4. Regarding the nature of subject matter/content presentation of the courses that you have taken/learned, please put a “√” mark under the option that indicates your opinion.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
Nature of the content (knowledge of the subject matter) presented for learning				
The main body of the text was logically sequenced.				
There were frequent reinforcements.				
There were feedback devices.				
The language used was simple and hence the whole course was readable and understandable.				
It encouraged me to read critically.				
It communicated to me directly.				

I was made to consult a dictionary (now and then) and other reference materials quite often.				
The presentation of the reading text did not catch my interest.				
The contents of the lessons were discussed in a friendly manner.				
The lessons were presented in such a way that their clarity gradually grows from simple to complex.				

The lessons invited me to read and work on the in-text questions, self-check exercises and activities				
The lessons were presented paying attention to my everyday language (common words, shorter sentences, and in personalized style).				
The lessons were made concrete.				
The lessons were supported with appropriate educational technologies.				

5. Were there hints and guidance built in your study material?

Yes, in all of them	
Not at all	
Only in some of them	

6. Did your course materials have clear and full descriptions on their cover pages? (That is, course title, course code, module number, and module title)

Yes, all of them had all information clearly and fully on their cover pages	
Only some of the courses had all such information on their cover pages	

7. If you came across with the course/s without the descriptions, what did you do to become clear about it? Please reflect your opinion here _____.

8. Were the color & the binding of the course materials stimulating to you for reading?

Yes	
-----	--

No	
----	--

9. If your answer to Q. 8 is 'No', what effects did it create on your learning? Please share us your opinion_____

PART-III. DATA ON THE STRUCTURE OF THE COURSE MATERIALS

1. **In relation to introduction (for the course, modular, and unit)**

Please provide us your opinion/level of agreement in the table shown below regarding the nature and purpose served by the introductions.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Nature, and purpose served by introductions</i>				

They explained to me some relevant points from my previous studies/				
They clearly and systematically informed me what I shall learn.				
They introduced me to what depth the course was dealt with.				
They informed me how I should use the course materials.				
They advised me to allot study hours appropriately to all types of tasks included within the course materials.				
They advised me constantly to evaluate my progress of learning.				
They informed me what lessons were coming next to what I was learning.				
They consisted of reminding notes for how long I should spend working on each module.				
They informed me the availability of feedbacks to self-check exercises & activities.				
They advised me not to be tempted to refer to the answer key prior to my trials.				
They included opportunities to enable me to recall my prior knowledge.				

They encouraged me to link my previous knowledge with the course I was learning.				
Their nature was quite the same to other textbook introductions of the conventional schools.				

2. In relation to objectives (course, modular, unit and section level)

Objectives are statements included in the self-instructional materials to inform the expected learning outcomes and to direct and encourage the learner what to do and how to achieve them.

Provide us, please, your opinion/level of agreement in the table shown below regarding the nature and purpose served by the objectives.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Nature and purpose served by learning objectives</i>				
The objectives provided me clear goals of my study.				

They assisted me to organize my learning activities more efficiently.				
They helped me to manage my study hours and to reduce misdirected efforts.				
They enabled me to evaluate my progress of learning.				
They were stated clearly and sufficiently in detail.				
They were framed to achieve knowledge				
They were framed to bring change of behavior/attitude.				
There were statements of objectives which were framed to acquire skills.				
Both course and module objectives were always same.				
It was boring for me to find them now and then in the course materials.				
They were like other statements of the course content.				

3. In relation to intext questions

Intext questions are relatively simple questions posed to check whether the learner is carefully attending their studying and to keep them on track. It is like what a teacher in the classroom does when they sees or doubts that a student is sleepy or lost attention to the lesson being given.

1. Were there intext questions in your learning materials?

Yes	
No	

2. If your response to Q. 1 is “yes”, did you work on all the intext questions?

Yes	
No	
I worked only some of them	
I ignored all	

3. If your response to the above question Q. 2 is ‘No’ or ‘I ignored all’ or ‘I worked only some of them’, please provide us your reasons for doing so.

No because	
I worked only some of them because	
I ignored all because	

4. If your answer to the above question, Q. 2, is ‘yes’, indicate your level of agreement, please, for the questions that follow.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Place and nature of intext questions</i>				
They were placed immediately after some whole idea or concept within a section of a unit of each module.				

They required me to stop reading and think about what I read so far.				
They required me to relate my personal experience with my reading or learning.				
They enabled me to have a dialogue virtually with my instructors.				
They required me to think and feel about the topic or the lesson that would follow next.				
They helped me to underpin my understanding of a lesson.				
It was boring to find them now and then in the course materials				
<i>Time of working on the intext questions</i>				
I worked on them whenever I came across with them.				
I worked on them after completing a unit of a study.				
I worked on them after completing a module.				
I worked on them after completing a course.				
I worked on them when I needed to revise a lesson.				

4. In relation to white space

A white space is a free space left for you to practice on the tasks provided to you to reflect and check your progress of learning.

Provide us please your opinion in the table shown below regarding the place and nature of white space left in the learning modules.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Place and nature of white space</i>				
I was advised to work on exercises on a separate sheet of paper.				
There were enough spaces left for every type of task left in the course materials.				
There was a space left only for intext questions.				
There was a space left only for self-check exercises.				
There was a space left only for activity questions and problems.				
There were not enough spaces left for every type of task left in the course materials				

1. In relation to learning activities

Learning activities are the most important devices/parts used in ODL learning materials. 'They are meant to keep learners purposely engaged with the material. Without such activities, our learners might assume that the only objective was to memorize the information we set before them' (Rowntree, 1990, as cited in Commonwealth of Learning, 2005).

Provide us please your experience, opinon & level of agreement with the questions listed in the table given below.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Place, nature, and distribution, of learning activities</i>				

They were placed immediately after a lesson in a section.				
They were placed immediately after a unit.				
They were appearing frequently.				
They were appearing dispersedly.				
They were all essay type questions.				
They were constructed with clear and precise instructions.				
Appropriate amount of time was provided to each set of activity.				

They were all interesting to do.				
There were demanding questions.				
There were true/false item questions.				
They were all short answer type questions.				
They were all multiple type questions.				
Different types of questions were included.				
There were questions asking me to put things/concepts in order.				
There were fill in the blank item questions.				
There were questions asking me to complete a graph/a diagram/a table.				
There were questions asking me to create something based on what I learned.				
There were questions asking to collect data				
There were questions requiring me to report my own observations or experiences				
There were questions requiring me to recall what has been taught.				
There were questions requiring me to explain the examples provided.				
There were questions requiring me to give examples from my own experience.				
There were questions requiring me to apply new				

concepts or principles.				
<i>Time of working on learning activities</i>				
I tried to work on whenever I found them.				
I tried working on them after I finished a unit of study.				
I tried working on them after completing a module of a course.				
I tried working on them after completing a course.				
I worked on them whenever I needed to revise a lesson.				
<i>Engagement and benefits of working on learning activities</i>				
They required me to apply what I learned in practical situations.				
They required me to discover new ideas.				

They required me to compare, differentiate analyze, evaluate, judge, and criticize concepts.				
They strengthened me to remain in my studying.				
They helped me to easily pass in the final examinations.				
None of them helped me to pass in the final examinations.				

1. In relation to Self-check Exercises

Also called as self-assessment questions being very important in ODL and are placed at the end of a unit of a study material having a diagnostic nature. They are meant to serve as summative evaluation of a student's self- learning because of the limited time for student-tutor contact. They serve for summative learning (Commonwealth of Learning, 2005).

Provide us please your answers for the following questions accordingly.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Place, nature, distribution, engagement, and benefits of working of self-check exercises</i>				
They were placed immediately after a lesson in a section.				
They were placed immediately after a unit.				
They were placed at the end of a module.				
They were placed only at the last module.				
They were all essay type questions.				

Appropriate amount of time was provided to each set of activity.				
They were all short answer type questions				
They were all multiple type questions				
Different types of questions were included.				
Most of them required me to recall what I learned.				
Some of them required me to apply what I learned in practical situations.				
Some of them required me to discover new ideas.				
They reinforced me to remain in my studying.				
They helped me to easily pass in the final examinations.				
None of them helped me to pass in the final examinations.				

2. In relation to examples, diagrams/graphs and answer keys to activities and self-checkexercises

Examples -- are the most popular devices used to help learners understand new ideas at the comprehension level and are used to help learners use the learning that they have acquired at the application level (Martens, 1998).

Diagrams -- are illustrative devices used to simplify the aspect to be studied to draw the attention of the learners (Commonwealth of Learning, 2005).

Graphs -- are pictures which show how two sets of information or variable amounts are related, usually by

Referring to your experience, please provide us your opinion or level of agreement with the questions listed

in the table below.

	SA	A	D	SDA
Item to be referred	4	3	2	1
<i>Nature, adequacy, and appropriateness of examples, figures/diagrams/graphs & answer keys</i>				
There were relevant examples provided for each lesson.				
There were adequate number of examples included for each lesson.				
Mostly the examples were short and concise.				
Mostly, the examples were clear-cut.				
Mostly, the examples were self-explanatory.				
There were appropriate figures/diagrams/graphs included whenever necessary.				
The diagrams/graphs were relevant to the topic under discussion.				
The diagrams/graphs were accompanied by explanatory references.				
The diagrams/graphs were clear and recognizable.				
I came across a diagram/graph with wrong explanatory reference.				
I came across an example/s wrongly placed,				
I came across a diagram/graph being irrelevant to				

the topic of interest.				
Measures taken (by you) on incorrect examples, diagrams/graphs				
I simply accepted them as correct because they were prepared by instructors.				

I referred to other books and got correction to them.				
I contacted a professional in the subject I was studying and got mistakes corrected.				
I contacted my tutor via an email/over the telephone and got the mistakes corrected.				
I contacted my tutor when face-to-face sessions were held and got the mistakes corrected.				
I could not do anything; rather I was demotivated to keep learning.				

3. In relation to unit summary

A unit summary is a discussion highlighting important points covered under each unit of a module and is usually placed at the end of each unit of learning.

Share us please your opinion/level of agreement for the following statements.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Place and nature of unit summary</i>				
There was a unit summary in each module.				
They were made short, precise, and comprehensive.				
They were reminding me of what I already learnt.				
They enabled me to normalize my study.				
They helped me to concentrate on the important				

points.				
They helped me to reflect on the work I was required to do in the course materials.				
They supported me to carry out a further check up on my performance and to consider the next steps of learning.				
They reinforced the main learning points that has been covered.				
They were made in building examples in it.				

4. In relation to feedbacks

Ausubel and Robinson (1971, as cited in COL, 2005:101) describe a feedback as a device used to promote learning and serve their purpose effectively if it is made continuous (especially for concept learning): immediately after the learner tried answering the activity (to prevent errors becoming embedded): and complete (not just an answer of 'right' or 'wrong') that is to mean it should explain to the learners as to why their answer was wrong or what the logic is behind the correct answer.

Provide us please your opinion or level of agreement with the questions listed in the table below.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Place and nature of feedbacks</i>				
There were feedbacks to each of tasks left in the module				
The feedbacks were given immediately after I gave my				

answer to the questions				
The feedbacks were given in the form of 'right' or 'wrong' type.				
The feedbacks were explanatory as to why I made wrong answers				
The feedbacks were discussing the logic behind the correct answers				
The feedbacks were helpful to check my progress of learning				
Some of the feedbacks were incorrect.				
All the feedbacks were correct.				
There were only model answers to limited number of exercises & activities				
<i>Measures taken (by you) on incorrect feedbacks</i>				
I simply accepted them as correct because they were prepared by instructors.				
I referred to other books and got correction to them.				
I contacted a professional in the subject I was studying and got mistakes corrected.				
I contacted my tutor via an email/over the telephone and got the mistakes corrected.				
I contacted my tutor when face-to-face sessions were held and got the mistakes corrected.				

I could not do anything; rather I was demotivated to keep learning.				
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5. In relation to Assignments

Assignments also commonly called as tutor-marked assignments are included in the self-instructional materials with purposes, among others, to serve learners to identify the most important parts of a course and to promote learning through creating a dialogue between the learner and their tutor.

1. Were you made to work on tutor-marked assignments?

Yes	
No	

If your response to Q. 1 is 'yes', please answer the questions that follow below.

2. When did you do the tutor-marked assignments?

After completing a course	
After completing studying through a module of a course	
After completing a unit of study	

3. How many tutor-marked assignments were sent to you? Write in the blank space please.

Per course	
Per module	
Per unit	

4. Did you attempt all the assignments and sent back to your tutor on time?

Yes	
No	

5. Did you work on all the assignments by yourself?

Yes, I did all of them by myself	
I got support from other people for all of them	
I got support for some of them	
I did not do any of them	

6. If you did look support from other people, what was the very reason behind that forced you to look support from other people?

Lack of time	
The difficultness of the course itself	

The difficultness of the questions	
The vagueness of the questions	
I ignored them as they were below the standard	

7. Did you benefit from working on the assignments?

Yes	
No	

If your answer for Q. 7 is 'Yes', please provide us your opinion or level of agreement with the questions listed in the table below.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Structure of the assignments and benefits achieved from working on them</i>				
There were clear and precise instructions for each activity left in the assignments.				
There was specified time to accomplish working on each activity of the assignment.				
There were examples included to guide how to work on the assignments.				
The assignments helped me to identify the most important parts of a course.				
They helped me to see the standard of work that was expected on the course.				
They helped me to effectively work on the overall				

assessment.				
They provided me an opportunity to have a dialogue with my tutor.				
They helped me to relate what I was learning to my own situation (e.g., assignment tasks based on your job).				
They helped me to pace my studying through the course.				
They enabled me to get detailed and personalized feedback from my tutor.				
They thought me to get things done within the allotted time.				

Please use the space left below if you have anything to say regarding the tutor-marked assignments. _____

6. In relation to Icons

Many ODL texts and web sites use icons/signs to indicate the nature of a piece of text or a task being used to guide learners through a complex piece of learning material.

1. Were the access devices (introductions, objectives, reading content, intext questions, etc.) of your learning materials represented by icons?

Yes	
No	

2. If your answer to Q.1 is 'Yes', did the icons convey the intended messages in your learning materials?

Yes	
No	

3. Were the icons used throughout the modules uniform for each access device?

Yes	
No	

4. Did the icons guide you through the course/module/unit of studies?

Yes	
No	

Please use the space left below if you have anything to say regarding the icons used in the course materials.

7. In relation to Self-checklist/Post-tests

A self-checklist or a post-test can be a good method of helping learners find out if they have understood everything in a unit of learning. If they answer any of the questions incorrectly, they can be referred back to the relevant part of the unit to have another attempt at learning that part (Commonwealth of Learning, 2005).

1. Were there self-checklists or post-tests in your learning materials?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

2. If your answer to Q.1 is 'yes', did you attempt all of them before working on activities or self-checkexercises left within each unit of learning?

Yes	
No	

3. If your answer to Q. 2 is 'yes', please give us your opinion or level of agreement for the following statements.

	SA	A	DA	SDA
Item to be referred	4	3	2	1
<i>Benefits achieved from working on self-checklists/post-tests</i>				
Most of them were directly related to the objectives of a unit of learning.				
They made me alert about the forthcoming activity.				
They were made to be referred within a given time.				
They informed me what type of media are associated to a specific unit of learning.				
They helped me to find out what I missed in the unit of learning.				
They gave me constant advice to refer back and read thoroughly what I seemed to be unconfident with.				
They served me to have a dialogue virtually with my instructor.				
They encouraged me to develop open communication with myself.				

They enabled me to score best results both in the assignments & my final examination.				
They motivated me to keep checking the progress of my learning.				
They made me to become responsible to my own learning.				

Please use the space left below if you have anything to say regarding the self-checklists _____

3. In relation to the Study Time allotted for a course

It is time that equates to the workload associated with the particular course of study (Fred Lockwood, 2017, 1998).

1. Was a reminding note included in the learning modules to guide you how long should you spend working

on learning on the course?

Yes	
No	

2. How do you evaluate the time provided to your course of study?

It was adequate	
It was fairly enough	
It was inadequate	

It was in excess for some of the modules	
I do not have anything to say here as I did not follow the directions specified in the course materials	

3. Were there times provided to each task you were required to do in the course materials? (For learning activities, self-check exercises, self-checklists, etc.)

Yes	
No	

Please use the space left below if you have anything to say for either of your 'Yes' or 'No' answer.

4. In relation to Glossaries

Glossaries are also a useful addition to an ODL course, providing a quick way for learners to check words that they do not understand. In print courses, glossaries usually appear at the end of the units (Fred Lockwood, 2017).

1. Were there glossaries included in your course materials?

Yes	
No	

2. If your response to Q.1 is 'yes', where were they located?

At the end of each study unit	
-------------------------------	--

At the end of each module	
At the end of the course	
Other, please specify	

3. Were the glossaries helpful for you?

Yes	
No	

4. If your answer to Q. 3 is 'yes', how did you benefit from the glossaries? Give us your benefits, please.

5. How frequently were you referring to the glossaries to check for a word?

Very frequently	
Very rarely	
Seldom	
Sometimes	

6. If your answer to Q. 5 is "very frequently", what do you think was the reason?

Most of the words were difficult for me to understand	
The vocabulary used in the course materials were not common languages	
I just wanted to have confirmation of my understanding of the words	

Please use the space left below if you have anything to say about the glossaries. _____

5. In relation to verbal signposts

Verbal signpost/s is/are a word or words that help learners to follow the text. Examples of verbal signposts include: 'as you saw in the previous unit', 'in the next example you will see this difference more clearly', 'that activity should have helped you to identify the main reasons for ...', and 'in the next unit we will explore some solutions to this problem'.

1. Did your learning materials comprise of verbal signposts?

Yes	
No	

2. If your answer to Q.1 is 'yes', how was their occurrence?

Very frequently	
Very rarely	
Seldom	
Sometimes	

3. Did you benefit from the verbal signposts?

Yes	
No	

4. If your answer to Q. 3 is 'yes', how did they benefit you? Give us your opinion in the table please.

	SA	A	DA	SDA
--	-----------	----------	-----------	------------

	4	3	2	1
Item to be referred				
<i>Benefits achieved from verbal signposts</i>				
They encouraged me to have a clear understanding of each unit of learning.				
They made me alert about the forthcoming discussion or reading text.				
They enabled me to understand the correlation created between consecutive lessons.				
They showed me the gap created because of misunderstanding of the lesson.				
They were reminding me of the type of obligation I should perform.				
They were awakening me to stick to the allotted study time.				

6. In relation to typography and layout

Typography is the style, size, and arrangement of the letters in a piece of printing material and layout refers to the way that something is arranged (Cambridge Advanced Learners' Dictionary, 3rd edition, 2007).

Please answer the following questions based on your experience with the learning materials.

Item to be referred	Possible answer	
	Yes	No

The learning materials were made with a good-sized page of paper having a spacious layout.		
--	--	--

The learning materials consisted of spaces left for me to make my own notes on the pages.		
The learning materials consisted of spaces left for me to write down my answers to activities.		
The learning materials kept a reasonable space below each heading or title.		
The learning materials used different types and sized fonts to indicate course name, module name, topics, units, sub-units, etc.		
The learning materials consisted of topics titles and numbers across the top of the pages till the last part of each topic.		
The learning materials used boxes, pointing fingers, rules, etc. to give emphasis to very important points.		
A page of the learning materials was not cluttered with many access devices that were included to direct me to study.		
Consecutive textual paragraphs were moderately spaced in the learning materials.		
Each reading text of the learning materials were prepared with restricted line length which made it the reading much easier.		

7. In relation to the house style/In-house style used for the learning materials

It is a style created with reference to the chosen and adopted layout and design that is made to be consistent throughout the learning material (COL, 2005). It is believed to underpin what the learner should do through repetitive exposure to each of piece of task included in the learning material.

Dear our respected student, please share us your opinion in the table below regarding the experience you have had with your learning material.

	SA	A	DA	SDA
--	-----------	----------	-----------	------------

Item to be referred	4	3	2	1
<i>Nature of the in-house style of the learning materials</i>				
The learning materials were prepared having similar layout and design.				
I could easily differentiate the learning materials of my university from the other by referring to its layout and design.				
The way the learning materials were made was stimulating to keep learning.				
The learning materials simply seemed to give a negative "take it or leave" impression.				

The learning material seemed to say 'Use me [and don't leave me].				
The study materials were prepared with the notion of user-friendly.				
I can easily carry the learning materials wherever I go (they are portable).				
The color, the margin, indent used in the learning materials encourage my learning.				

Thank you for sharing your valuable time.

APPENDIX F: QUESTIONNAIRE FOR COURSE WRITERS/COORDINATORS



EVALUATING THE QUALITY OF THE DISTANCE LEARNING MATERIALS INSELECTED UNIVERSITIES IN ETHIOPIA

COURSE WRITER'S/COORDINATOR'S QUESTIONNAIRE

Thank you for taking time to complete this questionnaire.

Instructors/coordinators who have prepared distance learning modules for management courses for the institutions mentioned below qualify to complete this questionnaire: Addis Ababa University & Kotebe Metropolitan University (Government Institutions) and Unity University & Renaissance Global College of Distance & Virtual Learning (Private Institutions).

The questionnaire consists of four parts i.e., Part-I, Part-II, Part-III and Part-IV which you are requested to complete fully.

Gentle and polite requests:

1. Please sign first the consent letter before completing filling in this questionnaire.
2. You are not expected to complete more than one questionnaire.
3. I am responsible to collect the completed questionnaire as soon as possible.
4. There is no need to write your name on this questionnaire and the information you provide us will be used only for research purpose.

Dear instructor/coordinator

Please provide us answers to the following questions (print a "✓" mark in the boxes) based on your perception and understanding. Your objective response is required.

NB: The abbreviations in the tables represent as follows:

SA = Strongly Agree A= Agree SDA =Strongly Disagree

UNC = Uncertain DA = Disagree

PART- I: PERSONAL DATA

1. Your gender:

Male	
Female	

2. Your age range:

20 or younger	
21 – 30 years	
31 – 40 years	
41 – 50 years	
Above 50 years	

3. Marital status:

Married	
Single	
Divorced/Separated	

3. Higher Degree achieved:

B.A.	
M.A.	
PhD.	

Other (Please specify)	
------------------------	--

4. Field of specialisation/Graduated in_____.

5. Number of years serving as an/a instructor/teacher at

Elementary schools	
Teacher Training Institutes (TTI)	
High schools	
Higher Institutions	
Other (Please specify)	

7. Which higher education institution were/are you working at when writing the courses, coordinating the program?

Addis Ababa University	
Kotebe Metropolitan University	
Unity University	
Renaissance Global College of Distance Education and Virtual Learning	

10. Which higher education institution are you currently working at? Please specify

_____.

PART-II: INFORMATION ON KNOWLEDGE OF DISTANCE & OPEN LEARNING

1. Do you have any knowledge of distance and open learning?

Yes	
No	
Only a little	

2. If your answer to Q. 1 is 'yes', where did you get to know about it? Provide us your opinion/level of agreement in the table shown below, please.

	SA	A	UNC	DA	SDA
Item to be referred	5	4	3	2	1
<i>A stance for experience to ODL</i>					
I got a degree in Open and Distance Learning					
From the introductory training given by the institution for which I wrote courses.					
Through reading for the purpose of course development.					
From the conferences I attended.					

I came to know about it through my exposure while learning through distance education system.					
I came to know about it from the name itself.					
Other (describe, please, if different from the ones mentioned above):					

3. If you attended to an introductory training which was supposed to build your capacity for distance coursewriting, what do you think about the training you acquired?

More than adequate	
Inadequate	
Adequate	
Disappointingly inadequate	

4. What do you think of the ability of the trainers who gave you the training?

More than adequate	
Inadequate	
Adequate	
Disappointingly inadequate	

5. If your answer to Q. 1 is 'No' or 'Only a little', how could you manage, then, to write distance learning courses? Please share us your experience. We need to know your effort and the difficulties you faced and the challenges you came up with.

6. Why do you think people choose to learn through distance education system? Please explain.

What do you think are the advantages/disadvantages of studying via Open Distance Learning mode?

Advantages:	
Disadvantages:	

8. Do you have any knowledge as to what level learning through distance education has so far reached?

Please explain in relation to its mode of delivery and recognition it has acquired worldwide.

9. Which mode (conventional or Open and Distance Learning, ODL) do you prefer to upgrade your educational level with? Why? Please explain.

PART-III: INFORMATION ABOUT THE STRUCTURE OF THE LEARNING MATERIALS

1. In writing the course materials, which approach did you follow?

Course team approach	
Individual approach	

2. What advantages/disadvantages or difficulties did you face in using the approach you followed?

Advantages

Disadvantages/Difficulties

3. Did you prepare a course plan before starting to write the course materials?

Yes	
No	

4. Why do you think preparing a detailed course plan prior to writing the course material is a necessity? Please explain.

5. Were you convinced as to why the course materials were designed in modular forms?

Yes	
No	

Please explain why you responded either of the two.

6. Did you specify **learning objectives** in the course materials? (i.e., course objectives, module objectives, unit objectives and section objectives)

Yes	
No	

7. If your response to Q. 6 is 'yes', why did you list the statements of the objectives at different places and for different structures? Provide us your opinion/level of agreement in the table shown below, please.

	SA	A	UNC	DA	SDA
--	-----------	----------	------------	-----------	------------

	5	4	3	2	1
Item to be referred					
<i>A reason for writing statements of objectives</i>					
As I was told to do so.					
They were devices directing me what content should be presented to the learner.					
They were devices used to limit the content to be presented to the learner.					
They were devices that guided me to evaluate students' learning.					
They were devices that enabled me to design how, what and when should the learners be presented with learning experiences.					
They were devices that guided me to create links between previous learning experiences with current ones.					

Other (describe, please, if different from the ones mentioned above):

8. Did you provide **instructions** for the different types of tasks that the student is expected to perform?

Yes, to all of them	
Only to some of them	
Not at all	

9. Did you make use of all the **access devices** in writing the course materials?

Yes, in all of them	
Only in some of them	
Not at all	

10. If your answer to Q. 9 is 'yes', what was the reason for that?

Because I was told to make use of them	
Because I accepted it as a mode of writing distance learning materials	
Because I was convinced that serve promoting student's learning in creating virtual engagement with their instructor	
Other (please specify)	

11. Did you suggest **time frame** to the student for completing the different learningtasks?

Yes, to all of them	
Only to some of them	
Not at all	

12. On what basis did you fix the length of the study time? Please explain what rationale you based on.

13. Did you provide **introductions** to the course, modules, and units?

Yes, to all of them	
Only to some of them	
Not at all	

14. Did you include **in-text questions** in the course materials?

Yes, in all of them	
Only in some of them	
Not at all	

15. Did you provide **activities** in the course materials to enable distance learners to apply what they learned, to judge (compare/contrast) ideas & facts, etc.?

Yes, in all of them	
Only in some of them	
Not at all	

16. Did you provide **self-check exercises** within the course materials?

Yes, in all of them	
Only in some of them	
Not at all	

17. Did you provide **a glossary** and **a summary** for each unit of study?

Yes, in all of them	
Only in some of them	

Not at all	
------------	--

18. Did you provide **model/actual answers** to self-check exercises and activity questions?

Yes, for all of them	
Only for some of them	

Not at all	
------------	--

19. Did you require your distance learner to consult other books or professionals in addition to the course materials?

Yes, in all of them	
Only in some of them	
Not at all	

20. How do you evaluate the length of time you were given to write the course?

More than adequate	
Inadequate	
Adequate	
Disappointingly inadequate	

21. Were there adequate reference materials for you to get appropriate information while preparing the learning materials?

Yes	
No	

22. Were you given a format/**a house style** to follow while you were writing the course materials?

Yes	
No	

23. Did you provide a **white space** in the course materials where the learner could take short notes and work on in-text question, self-check exercises & activities?

Yes	
No	

24. Did you provide **assignments for submission** which could be corrected, and be included into the grading of the course of study?

Yes	
No	

25. Were you able to pretest and evaluate the effectiveness of the course materials that you developed either in groups or independently by yourself before and after they were used for learning purposes?

Yes	
No	

26. Did you get any support from the course editors?

Yes	
No	

27. Did you benefit from the inputs of the course editors? Please explain to what extent you benefited.

28. Please use the space left below if you have anything to say or share to us regarding the whole process of course development (intention, orientation, set up, attitude of the institution & course writers, editors, knowledge of students' profile, etc.)

PART-IV: Perceptions of Course Coordinators (CC) and Course Writers (CW) 1. About Preparation Aspects of Course Development.

Statements	CC/CW	SA	A	UNC	DA	SDA
Complete schemes of studies were provided to the course writers.						
Format for unit writing was provided to be followed.						
Process for writing distance education material was explained and conveyed.						
Sufficient time was given for writing a course unit.						
Language experts were involved in the process of course development.						
Subject specialists were involved in the process of course development.						
Teaching materials were tried out.						
There was proper coordination among the personnel of course production.						

2. About Implementation Aspects Of Course Development.

Statements	CC/CW	SA	A	UNC	DA	SDA
Courses developed reflect new knowledge.						
The courses have potential to meet the future needs of the students.						
The courses equip the students with better professional insight and skill.						
Courses were developed in a way to make them self-instructional.						

Teaching materials were appropriate for target students.						
--	--	--	--	--	--	--

Teaching materials were attractively presented.						
Teaching materials were up to date.						
The revision of courses was invited in the light of new trends.						

3. **About Execution Aspects Of Course Development**

Statements	CC/CW	SA	A	UNC	DA	SDA
Teaching materials were presented in an understandable manner.						
Mass media were kept forth to promote education among the masses.						
Contents of courses were useful for everyday life.						
Existing courses are slightly fraught with errors and misconceptions.						
Existing courses contain practical work.						
Examples related to the everyday life are used properly in the courses.						
Students' activities are adequately provided in the course.						
Additional reading materials are indicated.						

Thank you for sharing your valuable time.

APPENDIX G: A RUBRIC ADAPTED FROM THE QUALITY MATTERS (QM) HIGHER EDUCATION RUBRIC, 6TH EDITION, USA

A Rubric adapted for the purpose under discussion composing of specific review standards from the Quality Matters (QM) Higher Education Rubric, 6th Edition		
General standards	Specific Review standards	Points
Course Overview and Introduction	1.1 Instructions make clear how to get started and where to find various course components.	3
	1.2 Learners are introduced to the purpose and structure of the course.	3
	1.3 Communication expectations: email, postal services, telephones, and other forms of interaction are clearly stated.	2
	1.4 Course and institutional policies with which the learner is expected to comply are clearly stated within the course, or a link to current policies is provided.	2
	1.5 Minimum technology requirements for the course are clearly stated, and information on how to obtain the technologies is provided.	2
	1.6 Computer skills and digital information literacy skills expected of the learner are clearly stated.	1
	1.7 Expectations for prerequisite knowledge in the discipline and/or any required competencies are clearly stated.	1
	1.8 The self-introduction by the instructor is professional and is incorporated in the distance learning material.	1
Learning Objectives	2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable.	3
	2.2 The module/unit-level learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.	3
	2.3 Learning objectives or competencies are stated clearly, are written from the learner's perspective, and are prominently located in the course.	3

(Competencies)	2.4 The relationship between learning objectives or competencies and learning activities is clearly stated.	3
	2.5 The learning objectives or competencies are suited to the level of the course.	3
Assessment and Measurement	3.1 The assessments measure the achievement of the stated learning objectives or competencies.	3
	3.2 The course grading policy is stated clearly at the beginning of the course.	3
	3.3 Specific and descriptive criteria are provided for the evaluation of learners' work, and their connection to the course grading policy is clearly explained.	3
	3.4 The assessments used are sequenced, varied, and suited to the level of the course.	2
	3.5 The course provides learners with multiple opportunities to track their learning progress with timely feedback.	2
Instructional Materials	4.1 The instructional materials contribute to the achievement of the stated learning objectives or competencies.	3
	4.2 The relationship between the use of instructional materials in the course and completing learning activities is clearly explained.	3
	4.3 The course models the academic integrity expected of learners by providing both source references and permissions for use of instructional materials.	2
	4.4 The instructional materials represent up-to-date theory and practice in the discipline.	2
Learning Activities and Learner Interaction	5.1 The learning activities promote the achievement of the stated learning objectives or competencies.	3
	5.2 Learning activities provide opportunities for interaction that support active learning.	3

	5.3 The instructor's plan for interacting with learners during the course is clearly stated.	3
	5.4 The requirements for learner interaction are clearly stated.	2
Course Technology	6.1 The tools used in the course support the learning objectives or competencies.	3
	6.2 Course tools promote learner engagement and active learning.	3
	6.4 The course provides learners with information on protecting their data and privacy.	1
Learner Support	7.1 The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.	3
	7.2 Course instructions articulate or link to the institution's accessibility policies and services.	3
	7.3 Course instructions articulate or link to the institution's academic support services and resources that can help learners succeed in the course.	3
	7.4 Course instructions articulate or link to the institution's student services and resources that can help learners succeed.	1
Accessibility* and Usability	8.1 Course navigation facilitates ease of use.	
	8.1.1 All the access devices are represented by icons.	1
	8.1.2 The icons convey the intended messages in the learning materials.	1
	8.1.3 The icons guide the learner through the course/module/unit of studies.	1
	8.1.4 The icons keep uniformity for each access device throughout the module.	1
	8.2 The course design facilitates readability.	3
	8.3 The course provides accessible text and images in files, documents, to meet the needs of diverse learners.	3

	8.4 The course provides alternative means of access to multimedia content in formats that meet the needs of diverse learners.	2
	8.5 Course multimedia facilitate ease of use.	2
	8.6 Vendor accessibility statements are provided for all technologies required in the course.	2

APPENDIX H: GROUP STATISTICS FOR INCLUSION OF ACCESS DEVICES IN THE ODL MATERIALS

	Current working place	N	Mean	Std. Deviation	Std. Error Mean
Learning objectives	Government	9	1.00	.000 ^a	.000
	Private	6	1.00	.000 ^a	.000
Provide instructions	Government	9	1.33	.500	.167
	Private	6	1.17	.408	.167
Suggest time frame	Government	9	1.67	.707	.236
	Private	6	2.50	.548	.224
Provide instructions	Government	9	1.00	.000 ^a	.000
	Private	6	1.00	.000 ^a	.000
Include intext questions	Government	9	1.33	.500	.167
	Private	6	1.17	.408	.167
Provide activities	Government	9	1.22	.441	.147
	Private	6	1.17	.408	.167
Provide SCE	Government	9	1.11	.333	.111
	Private	6	1.00	.000	.000
Provide glossary/a summary	Government	9	1.33	.500	.167
	Private	6	1.17	.408	.167
Provide model/actual answers	Government	9	1.22	.441	.147
	Private	6	1.17	.408	.167
a. t cannot be computed because the standard deviations of both groups are 0.					

APPENDIX I: GROUP STATISTICS OF THE EXECUTION ASPECTS OF COURSE DEVELOPMENT

	Current working place	N	Mean	Std. Deviation	Std. Error Mean
Teaching materials understandable	"Government"	11	3.91	.944	.285
	"Private"	8	3.38	.518	.183
Mass media promoted mass education	"Government"	11	2.45	.688	.207
	"Private"	8	4.38	.518	.183
Contents were useful for everyday life	"Government"	11	2.91	1.221	.368
	"Private"	8	2.75	1.165	.412
Existing courses were fraught with errors	"Government"	11	3.09	1.136	.343
	"Private"	8	3.63	.916	.324
Existing courses contained practical work	"Government"	11	2.55	.688	.207
	"Private"	8	2.38	1.061	.375
Examples were related properly to everyday life	"Government"	11	2.64	1.027	.310
	"Private"	8	2.63	.916	.324
Student activities were adequately given in the SLM	"Government"	11	3.27	.905	.273
	"Private"	8	4.25	.707	.250
Additional reading materials were indicated	"Government"	11	4.18	.751	.226
	"Private"	8	4.38	.518	.183

APPENDIX J: T-DISTRIBUTION TABLE OF CRITICAL VALUES (A - SIGNIFICANCE LEVEL)

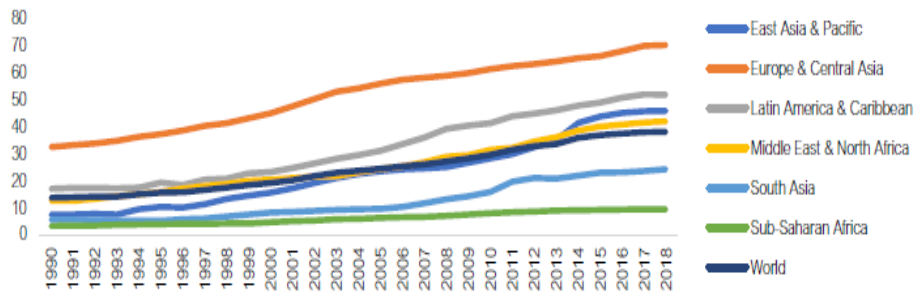
one-tailed α	0.10	0.05	0.025	0.01	0.005	0.0005
two-tailed α	0.20	0.10	0.05	0.02	0.01	0.001
df						
1	3.078	6.314	12.71	31.82	63.66	636.62
2	1.886	2.920	4.303	6.965	9.925	31.599
3	1.638	2.353	3.182	4.541	5.841	12.924
4	1.533	2.132	2.776	3.747	4.604	8.610
5	1.476	2.015	2.571	3.365	4.032	6.869
6	1.440	1.943	2.447	3.143	3.707	5.959
7	1.415	1.895	2.365	2.998	3.499	5.408
8	1.397	1.860	2.306	2.896	3.355	5.041
9	1.383	1.833	2.262	2.821	3.250	4.781
10	1.372	1.812	2.228	2.764	3.169	4.587
11	1.363	1.796	2.201	2.718	3.106	4.437
12	1.356	1.782	2.179	2.681	3.055	4.318
13	1.350	1.771	2.160	2.650	3.012	4.221
14	1.345	1.761	2.145	2.624	2.977	4.140
15	1.341	1.753	2.131	2.602	2.947	4.073
16	1.337	1.746	2.120	2.583	2.921	4.015
17	1.333	1.740	2.110	2.567	2.898	3.965
...

APPENDIX K: TERTIARY EDUCATION IN SUB-SAHARAN AFRICA, 2020

Tertiary Education in Sub-Saharan Africa

With 48 countries² and a population of over 1 billion, Sub-Saharan Africa (SSA) is one of the largest regions in the world. The current gross tertiary education enrollment ratio is 9.4%, which is well below the global average of 38%.³ Of course, the rate varies greatly within the region. For example, in Mauritius gross tertiary enrollment is 40%,⁴ in Cabo Verde it is 23.6%, in Ghana and Togo it is 15%, in Lesotho it is 10%, and in Niger it is 4.4% (figure 1). Overall, the region spends 21% of government education expenditure on tertiary education compared to 27% on secondary education and 43% on primary education.

Figure 1. Tertiary education enrollment, by region (% gross)



Source: UNESCO Institute of Statistics data.

APPENDIX L: TURNITIN REPORT

EVALUATING THE QUALITY OF DISTANCE LEARNING MATERIALS IN SELECTED UNIVERSITIES OF ETHIOPIA

ORIGINALITY REPORT

20%
SIMILARITY INDEX

18%
INTERNET SOURCES

8%
PUBLICATIONS

9%
STUDENT PAPERS

PRIMARY SOURCES

1	www.researchgate.net Internet Source	2%
2	hdl.handle.net Internet Source	1%
3	oasis.col.org Internet Source	1%
4	uir.unisa.ac.za Internet Source	1%
5	link.springer.com Internet Source	1%
6	citeseerx.ist.psu.edu Internet Source	1%
7	www.coursehero.com Internet Source	1%
8	epdf.pub Internet Source	<1%

APPENDIX M: CONFIRMATION OF PROFESSIONAL EDITING



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2 September 2023

Declaration of editing

EVALUATING THE QUALITY OF DISTANCE LEARNING MATERIALS IN SELECTED UNIVERSITIES OF
ETHIOPIA

by

ADERAJEW MIHRET TESSEMA

I declare that I have edited and proofread this thesis. My involvement was restricted to language usage and spelling, completeness and consistency and referencing style. I did no structural re-writing of the content.

I am qualified to have done such editing, being in possession of a Bachelor's degree with a major in English, having taught English to matriculation, and having a Certificate in Copy Editing from the University of Cape Town. I have edited more than 500 Masters and Doctoral theses, as well as articles, books and reports.

As the copy editor, I am not responsible for detecting, or removing, passages in the document that closely resemble other texts and could thus be viewed as plagiarism. I am not accountable for any changes made to this document by the author or any other party subsequent to the date of this declaration.

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