The design and development of instructional materials as potential contributor to academic success of secondary school open and distance learners in Botswana

By

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DEDICATION

For my dear family: my husband and two sons for their endless support and understanding – even if it meant my staying away from home for extended periods. They were my true inspiration in this very difficult journey. Special thanks to my colleagues at BOCODOL who always believed in me even when my own wings could not help me fly!

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LIST OF ACRONYMS USED

ADDIE	Analyse, Design, Develop, Implement and Evaluate
BEC	Botswana Examination Council
BGCSE	Botswana General Certificate of Secondary Education
BOCODOL	Botswana College of Distance and Open Learning
CCE	Centre for Continuing Education
CCL	Classroom Conventional Learning
CDE	Centre for Distance Education
CLT	Cognitive Load Theory
COL	Commonwealth of Learning
CSC	Community Study Centre
DE	Distance Education
DEASA	Distance Education Association of Southern Africa
DED	Distance Education Department
DFID	Department for International Development
DNFE	Department of Non Formal Education
EFA	Education for All
GSS	Gaborone Secondary School
ICT	Information and Communications Technology
IGNOU	Indira Ghandi National Open University
IT	Information Technology
JC	Junior Certificate
JCE	Junior Certificate Examination
MDG	Millennium Development Goals
MoE	Ministry of Education
MoESD	Ministry of Education and Skills Development
ODL	Open and Distance Learning
OUM	Open University of Mauritius
OUT	Open University of Tanzania
OU-UK	Open University – United Kingdom
RNPE	Revised National Policy on Education
SADC	Southern African Development Community
SAIDE	South African Institute for Distance Education

SPIL	Society for the Promotion of Ikalanga Language
SPSS	Statistical Package for Social Sciences
TID	Theory of Instructional Dialogue
UK	United Kingdom
UN	United Nations
UNISA	University of South Africa
USA	United States of America
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WM	Working Memory
ZOU	Zimbabwe Open University

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ABSTRACT

The design and development of instructional materials as potential contributor to academic success of secondary school open and distance learners in Botswana

It is assumed that open and distance learning institutions develop study materials that can adequately engage learners with quality content that ought to contribute to their content mastery. However, despite interventions distance learners continue to underperform compared to those in the traditional classroom system prompting the concern that high drop-out and failure rates may be ascribed to the study materials. This mixed-methods case study - undertaken in Botswana - investigated the design and development of instructional study material as possible barrier to content accessibility. The study was informed by Sweller's Cognitive Load Theory (1980) which was used to evaluate the process of designing and developing instructional materials while Gorsky, Caspi and Trumper's Theory of Instructional Dialogue (2004) facilitated assessment of interaction with and within the selected study materials. The participants - five material developers, 176 learners and six tutors - were purposively identified and representative of remote, rural and urban sites. A document analysis of study materials was carried out as well as six semi-structured group interviews and twenty individual face-to-face interviews. A questionnaire survey was also undertaken with all the participants. Manual coding and SPSS were used for data analysis. Major findings of the study were clustered into three themes: inefficiency, inadequacy and imprecision with a key finding linked to English being used as a language of instruction. Non-alignment of materials with learner profile, language proficiency and the national syllabus remain problematic. The ODL institution concerned ought to establish a policy for quality assuring effective content design and development while the inclusion of information and communication technologies may create a more interactive learning experience, thus improving content mastery and academic progression.

Keywords: accessibility, adult learners, Cognitive Load theory, Instructional Dialogue theory, language proficiency, mastery of content, material design and development, Open and Distance Learning.

Chapter 1: Overview of the study

1.1 Introduction

Researchers continue to discuss the development of open and distance learning, and its contribution to educating those excluded from or who are unable to attend or afford residential institutions of learning. To achieve their mandate, certain institutions pride themselves on the extensive learner support systems and well-crafted study materials they offer to mediate the learning experience. Despite the lengthy and rich history of open and distance learning (ODL) modes, the design and development of paper-based learning materials remain an under-researched area.

ODL learners are supposedly offered a learning experience on par with those in the traditional classroom system, yet their progression and throughput remain low. Many variables which may account for this unsatisfactory situation have already been researched (Gatsha, 2010; Otukile, 2011). I argue that possibly the instructional materials are preventing learners from mastering content and thus achieving eventual academic progression success. I thus selected to assess the design, development and delivery of printed learning materials provided by the Botswana College of Distance and Open Learning (BOCODOL), in order to establish if they, in any way, may be a barrier to accessing a rich learning experience.

1.2 Brief contextualisation of the study

Botswana is a former British colony and for this reason the country's education system was modelled on that of its former sovereign (Molosiwa, 2009). The medium of instruction is the national language, Setswana, up to standard four, for the public primary schools. Then English is used from higher primary (standard five), up to tertiary level (Chebanne & Nyathi-Ramahobo, 2003; Jotia & Pansiri, 2013; Republic of Botswana, 2003).

Botswana's national philosophy of education upholds the national principles of democracy, development, self-reliance, unity and *botho* (humanness), (Republic of Botswana, 1993). This philosophy also underpins the Botswana General Certificate of Secondary Education (BGCSE) programme. The national principles are further alluded to in both the country's Vision 2016, Republic of Botswana (1997) and the Millennium Development Goals (MDGs).

The MDGs resonate with Botswana's ideals as espoused in the National Vision – "Towards Prosperity for All" - commonly known as Vision 2016.

Vision 2016 outlines critical areas in which Botswana ought to have made a significant improvement when she celebrates her fifty years of independence in 2016. Amongst these critical priorities Botswana wishes to have an educated and informed citizenry (Republic of Botswana, 1997). This resonates with MDG goal number 2 which calls for global access to basic education and improved relevance and quality of education. The MDG goal number 3 stipulates that gender equality and empowerment must be upheld. In Botswana this can be achieved through ODL which is open to all people irrespective of gender, age or academic history.

Distance education institutions can deliver content through different modes such as traditional or conventional classroom learning (CCL), distance education (DE) mode, open and distance learning (ODL) mode, blended learning mode and others. Commonwealth of Learning - COL (2000a) defines open and distance learning as a system of teaching and learning where the learner and the instructor are separated from each other. This differs from conventional classroom teaching where it is assumed that the teacher's presence suggests learning will take place. Blended learning involves both the CCL and ODL in that is has elements of both, hence "blended". In Botswana, the two common modes are CCL and ODL.

Many countries, Botswana included, use the open and distance learning (ODL) study mode to address academic challenges facing their citizens. This is because ODL is able to enrol a large number of people at the same time (Siaciwena & Lubinda, 2008). ODL has become a priority in Botswana, especially as most employers are no longer able to allow employees time off for full time study as replacements are expensive (Mphinyane, 1999). In addition, many people are not prepared to leave their families for extended periods of time (Seeletso, 2011).

The government of the Republic of Botswana has always shown great interest in ODL, even during the pre-independence years (Republic of Botswana, 1977). This was because in the early 1960s, many primary school teachers in the British Bechuanaland Protectorate were trained through what was known as the Bechuanaland Extension College (BEC), later renamed Botswana Extension College (BEC). The College offered courses through

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correspondence (Mphinyane, 1999). Since then Botswana has ensured that distance education would provide education to the citizenry.

There was a need to educate more people at all levels of the education system, that is, primary, secondary and tertiary, as evidenced by the high usage of correspondence learning implemented by Botswana (Republic of Botswana, 1993). In 1977, the National Commission on Education reviewed the situation and recommended that there be provisions in place to develop education both in the formal and non-formal sectors (Republic of Botswana, 1977). This gave birth to the Department of Non-Formal Education (DNFE), which was established within the Ministry of Education in 1978. DNFE absorbed the Botswana Extension College (BEC) which then started operating as the Distance Education Division (DED) of the Department of Non Formal Education (DNFE).

The University of Botswana also started operating its distance education wing, Centre for Continuing Education (CCE) in 1991 (Mphinyane, 1999). In 1993, the National Commission on Education proposed the formation of a semi-autonomous and non-profit making college of distance and open learning (Republic of Botswana, 1993). This proposal was endorsed by the government white paper in 1994. All these developments gave birth to the Botswana College of Distance and Open Learning (BOCODOL), which was established by legislation in December 1998 to enable the provision of quality education through the open and distance learning mode to those who could not, for one reason or the other, attend a traditional institution as a full-time learner.

The map of the Republic of Botswana **(Appendix 1)** illustrates the distribution pattern of BOCODOL study centres, used by distance learners. ODL has gradually increased in Botswana and BOCODOL has over time, been able to attract learners across the country. BOCODOL now has five regional offices in major towns of Botswana, namely Gaborone, Palapye, Francistown, Maun and Kang. The five regional centres have community study centres, where face-to-face support sessions are normally conducted. These community study centres are existing schools, and while the conventional school activities are conducted during the day, between 0700 hours and 1600 hours, ODL activities are carried out between 1700 hours and 2000 hours.

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1.3 Rationale and research questions

Botswana College of Distance and Open Learning, (BOCODOL), is mandated to offer distance learners exactly the same curriculum as conventional students through what is called school equivalency programmes. School equivalency programmes offer subjects that CCL offers at their Junior Certificate Education (JCE) and Botswana General Certificate of Secondary Education (BGCSE) levels. For this reason, examinations for the CCL learners and the BOCODOL learners enrolled for school equivalency programmes, are the same in all respects as they are determined by the national examining body, Botswana Examination Council, (Botswana Examination Council, 2013). Offering distance learners and conventional students the same curriculum and same examinations places ODL on the same footing with traditional CCL. This means that ODL is not relegated to second-best in the country. This scenario also helps expose ODL learners to the same opportunities as CCL learners upon completion of their studies. This aims to provide both groups of learners with similar learning experiences, which makes distance learning course materials very important since they are the main source of instruction, and therefore a major contributor to the performance and progression of learners.

I have worked for BOCODOL for more than fifteen years, and over the years have observed a trend of learners either abandoning their studies before completion of the programme of study, or failing to perform satisfactorily during the examination (BOCODOL, 2010; 2011a). Several studies, including those by Gatsha (2010) and Otukile (2011), have suggested possible contributing factors to the unimpressive academic performance by BOCODOL learners. Gatsha's study states that learning support is highly compromised at BOCODOL. He wrote extensively on the lack of an effective learner support strategy, such as ineffective tutors, which contributed to learners disengaging and finally terminating their studies. Gatsha (2010) further argues that there is a clear mismatch between English used as a medium of instruction in the study materials and the proficiency of some learners where English is " *their third or fourth language".* He found that the materials used by secondary school student enrolled with BOCODOL were not developed *"for 2nd language speakers and not for learners from marginalised communities ..."* (p.140).

Otukile (2011) concurs with Gatsha in that distance learners are not given the support they need to help them move from CCL mode into the unfamiliar environment of ODL. He further

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argues that there is a very wide gap in orientating and helping distance learners to fully adopt and embrace the ODL philosophy. He asserts that ODL institutions such as BOCODOL need to help their learners understand that their *"teacher is supposed to be in print" (p.66)*. This, he writes, should be made clear as he observed that there were tutors *"who absent themselves ... and learners were frustrated by lack of a permanent presence of a teacher"* (p.67). Though the two scholars provide valuable insights, the focus of their studies was mainly on learner support and how its absence or mismanagement could negatively impact on learners.

The table below shows results for candidates who sat for English language in 2012, 2013 and 2014 in 2012 and the various symbols obtained by the candidates.

Table 1: English Language results for ODL learners – for 2012 - 2014

Year	No. of English Language candidates who achieved these symbols										TOTALS		% Pass at Grade				
	*	A	B	C	D	E	F	G	U	X	Grades	* - U	U	X	* - C	* - E	* - G
2012	0	0	32	382	1277	850	329	81	30	232	3213	2981	0.93	7.22	12.9	79.1	91.8
2013	0	0	36	236	868	967	513	187	39	514	3360	2846	1.37	18.0	9.56	74.0	98.6
2014	0	2	21	223	1321	1643	642	116	85	1310	5363	4053	6.07	2.10	24.43	79.20	97.90

Source: BOCODOL, 2014

Table 1 shows English language results for ODL learners enrolled with BOCODOL over three years: 2012, 2013 and 2014. Symbols learners could achieve were from distinction (*), up to X, where:

* represents Distinction

A, B and C represent Credit

D and E represent Pass

F represents Fail (those that had sat for the examination and failed to achieve the minimum pass mark)

G and U represent those who achieved very low grades that they could not even be awarded a mark

X represents those that had registered for the examination but did not write it.

The important category is one on percentage of candidates in the "* - C". This category represents the number of candidates who had obtained distinction to credit. In 2012, only

12.9% of the total school equivalency candidature enrolled with BOCODOL obtained between distinction and credit. In 2013 and 2014 the same category had 9.56% and 24.43% respectively. This implies that English is not performed well looking at the grades. This might as well have effect on other subjects as English is the language of instruction for all subjects.

Apart from Phillips (2007), Reed (2010); Sibomana (2014) and Stewart and Lopes (2015), not much has been researched regarding learning materials, specifically those developed for school equivalency programme and how they contribute to the learning process. This dearth has also encouraged me to carry out this research, with specific reference to secondary level study materials. The other available literature, according to Indira Gandhi National Open University - IGNOU (2008) and Schlosser and Anderson (1994) further revealed that the design and development of ODL print materials especially in African ODL institutions is under researched. As an ODL practitioner, I argue that at face value, the printed learning materials appear to be well designed and adequate in terms of content and quality yet learners are not progressing adequately with their studies. The study is about accessibility, and for materials to be considered accessible there should be learner progression. Learners should also be able to sit for the examination, and perform well enough to be able to continue with their tertiary education. This is not happening at BOCODOL. The learners' inability to master content leads to the research question regarding the design features of the study materials. This study sets out to better determine how accessible the study materials used by the BGCSE learners are. With this background, my study will be guided by the following critical questions:

(i)   What are the key design features of printed study materials provided to secondary school level ODL learners enrolled with BOCODOL?

(ii)   To what degree does the design, development and delivery of ODL study materials facilitate access to, and mastery of content?

Learner motivation and progression is critical as BOCODOL transforms to be an Open University. The transformation, however, will not affect the open schooling which offers secondary school equivalency programmes. Open schooling will then form a centre in the newly formed University.

1.4 Scope of the study

The study only looked at the BGCSE programme because it is the point of entry into tertiary education. I also used the English BGCSE course because English is the language of instruction in Botswana schools. The course materials were written in English. The content was based on the English syllabus. My participants were drawn from BOCODOL centres in Kang and Gaborone regions, and I sampled learners enrolled for English language. The learners were from remote, rural and urban centres. There were also learners from Gantsi State Prison. BOCODOL Kang Region is in the Kgalagadi area. This is the area mostly covered by the Kalahari desert. Learners in this region are faced with challenges that include lack of resources such as libraries that could facilitate their learning. Some are not even able to access tutors or study centres. In this study, I covered the 2009 to 2014 cohorts.

1.5 Clarification of key terms

Creswell (2005) and Punch (2006) suggest that scholarly writings require definitions of terms when specialised technical terms are used, or when such terms would not be understood by people outside the field, or to avoid misunderstanding among peers. The following ODL concepts, listed in alphabetical order, are explained to clarify how they are used in the context of this study.

Accessibility – in this context accessibility refers to the learners' ability to understand and attain mastery of content, and to attain the desired level of achievement. Learners are expected to effectively engage with, and use their study materials, to master content and progress with their studies.

Blended learning – refers to a teaching/learning system which uses both the traditional classroom face-to-face system and distance learning. In other words, this system has elements of both conventional mode and distance mode functioning on an equal basis, for instance 50% distance and 50% conventional (COL, 2005). Blended learning can also be viewed as an approach to learning and teaching which combines and aligns learning undertaken in face-to-face sessions with learning opportunities created online to facilitate more interaction.

Conventional classroom learning (CCL) mode – this refers to a traditional method of delivery of education where the teacher's presence is expected to ensure learning takes place.

The effectiveness of face-to-face teaching generally influences the academic progression and performance of the learners significantly (COL, 2004).

Curriculum – this is a document which includes the goals, objectives and plans that have been put together to prescribe the content to be delivered and assessed in a certain programme of study.

Instructional design – this process involves analysing learners' profiles and their learning needs, then developing content and delivery strategies that can meet those needs. Instructional design is a specialised form of sequencing and chunking the content to be mastered and includes how the content is to be assessed.

Interaction – this study views interaction as communication between two or more different human resources, with the view of yielding positive results. Evans (2010) considers interaction as the effective exchange of information between parties with positive outcomes. Similarly, Moore (1989) and Davis (1988) consider interaction a possible relationship between learner and content, learner and learner, and between learner and instructor.

Learner performance – Nonyongo & Ngengebule (2008) explain learner performance as active participation in learning events, course completion and as achievements measured through grades achieved in assessment opportunities such as assignments, tests and examinations.

Learning/study materials – these are usually printed booklets but could also be materials that have the content that has to be imparted to the distance learners during their study. The study materials for open and distance learners are written in a special way to encourage independent learning as learners generally study on their own, in isolation. This is done by designing tasks that keep the learner involved and by providing instructions or explanations as if the instructor were in the class. What is crucial in the well-designed study materials is the "teacher's voice" which should be "heard."

Learning support – refers to the academic assistance provided to distance learners to enhance their academic performance (Simpson, 2002; Thorpe, 2002). This may include tools that may be seen to facilitate or enhance learning such as face-to-face support sessions,

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tutorial letters, comprehensive and timely feedback, revision items, motivational workshops and taking learners through past examination papers. Learning support may also include extra assistance that may eliminate any hindrance that may prevent learners from accessing content.

Marginalised communities – in the context of this study, marginalised communities refer to people with limited access to socio-economic amenities viewed as basic for typical human survival in the 21st Century, for example – electricity, water, sanitation, housing, with no access to welfare programmes and would generally be excluded from the rest of society. Marginalised communities often have to travel great distance to purchase food and to obtain health services, etc. Marginalised communities are often viewed as "outsiders" by other citizens. This negative attitude extends to some government departments who deny marginalised communities certain amenities such as water, just to force them to leave their indigenous settlements to relocate to more formal villages.

Open and distance learning (ODL) is a method of learning that involves studying at a distance. The method overcomes barriers related to age, gender, and physical distance for learners in remote locations who are unable to access conventional education. Yousuf et al. (2008) view ODL as an umbrella term used for educational approaches covering distance education and open learning, and enables learners *"to qualify without attending college in person, or open up new opportunities for keeping up to date no matter where or when they want to study"* (p.123). Open learning, in other words, has no academic restrictions for people who wish to study for any programme using the mode. Yousuf, Anwar, and Sarwar (2008) view open and distance learning as *"an organised educational activity, based on the use of teaching materials, in which constraints on study are minimised in terms of either access, or of time and place, pace, method of study, or any combination of these"* (p.123).

ODL is very close to distance learning as they both function with a physical geographical separation between the facilitator and learner. The main difference between **distance education** and **open and distance learning** is that the latter emphasises the absence of barriers such as age, place of abode, types of media to use to enhance successful study, and points of entry or exit for different courses that can deter one from enrolling for any programme of one's choice, (COL, 2004). *Distance education* is also a method of teaching and learning in which the students are not required to be physically present at a specific

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location or time during the term. Instead, tutors and learners communicate by exchanging printed or electronic media or through technology that allows them to communicate in real time (Moore & Kearsley, 2005; Tladi & Moses, 2006). Yousuf et al. (2008) define distance education *as "an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner,"* (p.123). Distance education, unlike open and distance learning, has several restriction on enrolment primarily that minimum level of education has been attained prior to being admitted to a particular programme.

Progression − in this study progression refers to forward movement due to acceptable achievement, ie, in this case mastery of BGCSE English content.

Remote learner − In this study, remote learners refer to learners who are geographically very isolated and commonly disadvantaged by poor infrastructure. They study alone, in isolation and lack the necessary amenities that might facilitate their learning. These learners have little or no access to study centres or libraries. They cannot access tutors for academic support, because transport is problematic.

1.6 Research design and methodology

Research in the social and human sciences can follow a qualitative, quantitative or multiple methods research approach. Selection of a particular research design is normally influenced by the issues the researcher wishes to address (Creswell, 2003).

1.6.1 Paradigm

My study was largely informed by the interpretive paradigm where a researcher can interact with the subject under investigation (Creswell, 2005). Interpretive design involves real-life situations (Creswell, 1993; LeCompte & Preissle, 1993; Leedy & Ormrod, 2010). As a researcher I was thus able to make interpretations regarding what I saw and understood from the study materials and my other sources of information. Clarke and Dawson (1999) highlight two of the advantages of the interpretive paradigm as follows:

- it recognises the existence of multiple social realities
- it allows the researcher to explore different interpretations of different social experiences.

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Though mainly qualitative, this study followed a "nested" method approach. This was because I used both the qualitative and quantitative research methods to investigate the design and development of BOCODOL ODL materials. This is in line with Creswell's view that a mixed methods design is useful to capture the best of quantitative and qualitative approaches. Creswell (2003) further observes that the mixed methods approach utilises strategies of inquiry where data collection can either occur at the same time or in a sequence. He asserts that the advantage of using multiple methods is that the researcher is able to use the results of the qualitative component to explain and interpret the results of the quantitative component of the research.

The qualitative approach is most suited to my study as it enabled me to derive a full understanding of the issue of the design and development of ODL study materials. I considered it most appropriate as I investigated study materials and human subjects' documented experiences and opinions (Gough & Madill, 2007). Qualitative researchers conduct their studies in the field where participants live and work, and these are important contexts for understanding what participants are saying (Creswell, 2007). This enables researchers to have personal contact and interaction with both the participants and the actual materials or other documents under evaluation.

To gain a deeper understanding of the study materials I conducted a case study, with BOCODOL study materials as my unit of analysis.

1.6.2 Case study design

Brewer (2007) views case study as a detailed account of a particular example of a phenomenon, experience, event or situation. Brewer (2007) further argues that case study can use multiple methods for collecting data, which helps in establishing trustworthiness of the study. Bromley (1986) concurs with the view that case studies, by definition, get as close to the subjects of interest as they possibly can, partly by means of direct observation in natural settings, partly by their access to subjective factors, thoughts, feelings and desires.

I used a case study approach to gain an in-depth understanding of the study materials developed for use by ODL secondary level learners. Wimmer and Dominic (2000) explain that a case study design is advantageous in research as it provides a large amount of information and detail about the research topic and allows the researcher to deal with a wide variety of data. Henning, Van Rensburg, and Smit (2004) point out that the case study can

also use both qualitative and quantitative methods of data gathering and analyses to present a full picture of the phenomenon, a view collaborated by Creswell (2007, p.73) in his observation that *"case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information."*

1.6.3 Materials reviewed

I reviewed twelve BGCSE English study units that are used by learners attempting to obtain a secondary school exit certificate from BOCODOL. The materials were first developed and implemented in 2001 and have not been revised since then. The study materials were supposed to follow a thematic theme. This means that if, for instance, Unit 1 was entitled "*Entertainment",* all examples and all the content was to be centred around this theme. The materials have been presented as Volume 2 of this study.

1.6.4 Research participants

Purposive sampling *"means that the inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study"* (Creswell, 2007, p.125). This means that I selected people with traits or characteristics needed for my studies, a view shared by (Briggs, Coleman & Morrison; 2012; Creswell, 2003; and Black, 1999). For my study, I purposively selected five teachers who had contributed to the development of the study materials under review, as well as six BGCSE English tutors who were representative of each research site, and 176 learners as participants. I purposively sampled learners who had been studying with BOCODOL for at least one year (12 months). Tutors selected had been with BOCODOL for a minimum of six months and the material developers who had contributed to the development of the material under review, either as a writer or an editor.

1.6.5 Data collection process

Data can be collected using a number of sources, and for my study I was the central agent as I was personally involved in the process. Leedy and Ormrod (2010, p.96) posit that *"qualitative researchers are often described as being the research instrument because the bulk of their data collection is dependent on their personal involvement in the study."* During data collection, I inquired about the recruitment exercise of engaging both material developers and tutors. I established whether material developers were trained and given any support by the institution during their engagement with the College. I evaluated the study

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materials to establish if they contributed to learners' mastery of content, and ultimately progression in their studies. In addition I designed and administered questionnaires and conducted interviews.

1.6.6 Instrumentation

Cohen, Manion and Morrison (2007) explain instrumentation as methods that the researcher will use to collect data, and how these data will be collected. They further explain that the methods and instruments used to collect data should be the most suitable for issues to be addressed. In other words, instruments for data collection need to gather relevant information in order to answer the research questions. Questionnaires, interviews, and document analysis were used as data collection instruments and will be fully explained in Chapter 3.

Document analysis

The documents that I evaluated were study booklets that made up the BGCSE English course materials. These were the most suitable documents to provide me with the necessary information I needed because they had the content that learners were expected to learn and master. Document analysis involved intensive reading of these written materials. I did a close reading and evaluation of BOCODOL study materials, assignments and assessment items. The analysis was done to check whether there were features that make materials sufficiently learner-friendly and accessible to reduce the isolation experienced by learners and enhance active learning. The documents I used in my study were primary sources of information and *as such original to the problem under study* (Mouton, 2001). As the main agent of data collection, I was able to get information I needed directly from the documents. I used the Commonwealth of Learning and SAIDE Quality Standards as guiding frameworks to establish the quality of the materials developed for BOCODOL learners. I developed my own criteria for assessing material development, **Appendix 6**, to evaluate the study materials as the existing ones could not adequately address one of my research question on the key features of ODL printed study materials used by BOCODOL. This was because they did not foreground English language proficiency in the design and development of study materials for a secondary level course.

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Questionnaires

In this study, I distributed 300 learner questionnaires. Out of the 300, 176 learners responded and returned their questions. I also distributed questionnaires to five material developers and questionnaires to six tutors to complete. For both the tutors and the material developers there was a 100% response rate. The material developers' questionnaires, **Appendix 2**, were used to establish whether material developers of these materials were adequately trained for the purpose. The questionnaires were also used to obtain their opinion of the general features of the study materials including the physical layout or structure such as the font and illustrations. Material developers were asked to provide information on the process of materials development, for instance the theories they used, whether they had any training before embarking on the writing exercise, whether they used teamwork when developing these materials and whether they used any quality standards. The learners' questionnaire (**Appendix 3**) helped establish perceptions and attitudes learners had regarding their study materials. The tutors' questionnaire (**Appendix 4**) was aimed at establishing the extent of support tutors gave to learners and whether this support could contribute to a better understanding of study material content by learners, and hence mastery of content.

Interview schedules

For this study I used both the group and one-on-one. I first conducted group interviews for participants to gain confidence in their interaction with me. Later on I used the same participants to conduct one-on-one interviews to give opportunity to introverts and shy participants. However, there were ten other learners who were not willing to participate on one-on-one interviews but were willing to join the group interview. The twenty-six interviews for this study were informal and semi-structured, and conducted at a time convenient to the participants. The participants had, themselves, suggested the meeting times and venues with which they were comfortable. The interviews took an average of 20 and 25 minutes to complete. The interviewees were thirty BOCODOL learners doing BGCSE English language as one of their subjects. I, however, took cognisance of the fact that the group interview may be my main challenge as some interviewees may be too shy to join the discussion, and hence may provide inadequate data (Creswell, 2007; Krueger, 1994; Morgan, 1988 and Stewart & Shamdasani, 1990). Experience has, however, shown that people feel more comfortable talking in a group than alone, and that interaction among participants may be more informative than those conducted with individuals. Merriam (2009, p.155) defines

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an interview as *"a process in which a researcher and participant engage in a conversation focused on questions related to a research study."*

Learners were interviewed on whether the materials were relevant for their use and if they were able to study independently using them, whether materials adequately prepared them for the examination. I designed an interview schedule (**Appendix 5**) for both the group and one-on-one interviews. Both types of interviews were face-to-face and this helped me establish a relationship with my participants. The interviews also allowed me to include probing questions to obtain more details from answers given. Interview questions in qualitative research are less structured as individual respondents define the world in different ways, a view corroborating Merriam (2009). With permission of the participants, some parts of the interviews were recorded for transcription and translation purposes. During interviews, I also noted gestures not captured when talking such as body language, facial expressions and tone of voice.

1.6.7 Data analysis

Data analysis involves unpacking the data collected and trying to make sense and give meaning to it. I manually coded my qualitative data from both my interviews and document analysis to bring together similar and related findings into categories. Then I grouped them into themes which emerged. For my quantitative data I used SPSS reports to further assist my process of data analysis. In-depth details of the analysis will be discussed in Chapter 4.

1.7 Validity and trustworthiness

Creswell et al. (2010) place emphasis on the importance of research results that remain the same even when obtained on different occasions. This will mean that the findings of the study are valid. Validity, according to Mayan (2001), is the accurate presentation of a particular context or event as described by the researcher. It is important to have valid data that can be transferred. Triangulation of methods was used in this study to further establish both validity and trustworthiness. Triangulation is important in facilitating interpretive validity and establishing data trustworthiness. Neuman (2000) explains triangulation as combining qualitative and quantitative methods in order to observe something from several angles or to acquire multiple dimensions of the same phenomena by applying different research measures. Stake (2005) further explains triangulation as a process that generally uses multiple perceptions to clarify meaning, verifying the repeatability of an observation or

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interpretation. Using both qualitative and quantitative methods was good in that the two complemented each other, and using the two paradigms together helped in establishing trustworthiness of findings (Creswell, 1994; Johnson & Onwuegbuzie, 2006; and Neuman, 2000). I also shared the data captured with the participants of my study for them to check if they agreed with what had been recorded. This is known as member checking (Huberman & Miles, 2002; Merriam, 2009).

1.8 Ethical considerations

I successfully defended my research proposal in May 2012 and prepared the necessary documents for submission to the institutional ethics committee. The documents were also shared with my supervisor and statisticians. In October 2012 I was granted full ethical clearance. Once my ethical clearance was obtained I wrote to the Executive Director of BOCODOL requesting permission to carry out my study in his institution. The letter detailed the purpose of my study, and what the institution stood to benefit from this research. Details of my ethical considerations are discussed in section 3.4 of Chapter 3.

Before the start of the study, where people were involved, I invited them to participate in my study. I gave those who agreed some consent forms to study and establish if they agreed with the terms of participation. I informed them of their rights as participants. I advised them that their participation in the study was entirely voluntary and that they would be able to withdraw from the study at any time without negative consequences (Creswell, 2009; Merriam, 2009; Miles & Huberman, 1994). This proved relevant especially to learners in special circumstances such as prison in-mates and others considered vulnerable who felt uncomfortable participating in the study. I also talked to participants about informed consent, and advised that they could either agree or disagree to participate in the study. The participants were assured of their safety in participation, privacy and anonymity during the study if they so wished (Bak, 2009; Brewer, 2007; Maree, 2010; Mouton, 2001; and Punch, 2006). I explained to the participants the implication of their participation and how the information would be used. I, however, did not use any minors in my study as BOCODOL learners, staff members and material developers were all over 16 years of age and did not need parental consent for them to take part in the study.

During the data collection phase, I was able to interact with participants on my own as they spoke both Setswana and English. They were all fluent in Setswana, though some struggled

with English. I did not need the services of an assistant for interpretation purposes as I had initially thought. So the participants were not considered linguistically vulnerable. Another ethical issue is the failure to acknowledge other people's works and use them as your own. Use of another person's ideas should be fully acknowledged, otherwise the practice will be viewed as intellectual theft. This is an ethical issue I upheld during the course of my study.

1.9 Anticipated research constraints

Punch (2006) explains limitations as restrictive weaknesses which are unavoidably present in a study. At the start of my study I decided to use a mixed methods approach as I thought it could best answer my research questions. This was despite knowing that a mixed methods approach would need me to spend more time doing both my data collection and data analysis. I also anticipated a diverse group of learners with a possibility of a language barrier. This was because some of my research sites were from areas that were predominantly non-Tswana speakers. However, all my participants were fluent in Setswana and therefore, there was no language barrier challenge.

1.10 Outline of the study

My study has five chapters summarised as follows. **Chapter 1** is the overview of my study. The chapter discusses the introduction and contextualisation of the study, as well as an explanation of key terms used in the study. The scope of the study, the research design and methodology and anticipated constraints are also discussed. **Chapter 2** gives the review of the related literature. This helped me establish what and how much other scholars had written about the design and development of ODL study materials, and how these had contributed to learners' accessing and mastering the content. In Chapter 2 I also introduced the two theories that informed my study: Cognitive Load Theory and Theory of Instructional dialogue. **Chapter 3** discusses the research design and methodology. The chapter discusses participants of my study in more detail; explaining who they are, where they are and why they were identified as participants of this study. In this chapter, I also discussed the paradigm and design I used for my study, and why I decided on that particular paradigm. I explain and justify the methods used in the study. I further explain my use of multiple methods for data collection and analysis, as well as the strategies used to ensure validity, trustworthiness and reliability of my findings. Presentation of data and the analysis, as well as findings of my study are dealt with in **Chapter 4**. This chapter offers explanations of what these findings

mean. It is here that I used thick description in the form of direct quotations as well as numbers where necessary to support my findings. The final chapter of my study, **Chapter 5**, looked at the significance, implications and recommendations of the study. This chapter unpacked the meaning of the findings, and how they relate to current practice. Most importantly, this chapter suggests possible areas for further research and policy formulation.

1.11 Conclusion

This chapter introduced my study, the purpose of which was to investigate the accessibility of ODL printed learning materials and their contribution to secondary school level learners' mastery of content and eventual academic progression. In this chapter, I briefly introduced the participants of the study, material developers, learners and tutors of ODL study materials. I explained key terms that would be used. I also discussed and justified the use of the research design and methodology. I explained my data collection and analysis processes, and alluded to how I ensured validity and trustworthiness. Ethical considerations as well as anticipated research constraints were briefly discussed in the context of the study. Finally, an outline of the chapters was provided to allow the reader to appreciate how the study was structured.

In the next chapter, I will review the literature related to the development of ODL study materials. I will introduce Sweller's Theory of Cognitive Development, and use it to guide my literature review. Theory of Instructional Dialogue will be used to facilitate dialogue during the design and development of ODL study materials.

Chapter 2: Review of the related literature

2.1 Introduction

Open and Distance Learning (ODL) has unique features that make it different from the traditional conventional classroom mode of delivery. One feature is that ODL is flexible and learner freedom is emphasised, with no barriers regarding gender, age, time and other factors (COL, 2000). This flexibility means that learners study at their own pace, own time and place of choice. The primary mode of delivery in most developing countries like Botswana is print, unlike in developed countries such as the United Kingdom where computer conferencing and other technology is key (COL, 2000). Basaza, Milman, and Wright (2010) support this view when they posit that

> *Globally, distance learning makes use of information and communication technologies (ICTs) to deliver learning opportunities as well as to provide access to resources and to facilitate interactivity. However, distance learning in Uganda is dependent on printed modules with supplementation by face-to-face sessions* (p.87)

Study materials that offer learners academic support are also sent to learners and may include audio and radio programmes. These have, nonetheless, proved to be no match for the high technology used in the developed countries such as the introduction of podcasting to distance education to reduce isolation as well as to promote inclusivity, as argued by Lee and Chan (2007).

Many countries, Botswana included, use the open and distance learning (ODL) study mode to address challenges facing their citizens. This is because ODL has proved to be able to absorb and reach out to a large number of people at the same time (Siaciwena & Lubinda, 2008; Reed, 2010; and Stewart and Lopes, 2015). Hence the philosophy of ODL is growing in popularity in the developing world. However, there is a gap in the literature on the accessibility of print materials used for ODL. Studies including works of Lee and Chan (2007), and Basaza, Milman and Wright (2010) provide literature on using print materials in ODL. Despite this, it still remains to explore the effect the materials have on learners, especially in a developing context. In this chapter, therefore, I review the literature related to the development of ODL in a developing context. I also discuss the design and development

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of effective and interactive ODL print study materials for both developed and developing contexts. In this chapter I again look at the Cognitive Load Theory and how it could contribute to development of highly appropriate and effective print study materials that can facilitate knowledge acquisition and academic progression of learners. I then discuss the Theory of Instructional Dialogue and how ODL material developers can use it to develop highly interactive, engaging and conversational study materials.

The next section discusses the background of ODL in sub-saharan Africa.

2.2 Background of open and distance learning in sub-saharan Africa

One can argue that ODL is a "modernised" version of what used to be correspondence studies of the nineteenth and twentieth centuries. During that period, study was mainly done through postal mail services (Mphinyane, 1999). Today many institutions are beginning to use ODL as it has vast advantages, as observed by (Mphinyane, 1999; Sibomana, 2014; and Stewart and Lopes, 2015). One merit of ODL is that it has the potential to increase access in enrolments more substantially than the traditional face-to-face mode. Basaza et al. (2010) and Stewart and Lopes (2015) explain that distance education may be useful in addressing enrolment space pressures experienced in conventional or face-to-face institutions. This is corroborated by Nage-Sibande (2011) who made an observation that the Southern African Development Community (SADC) region may take full advantage of ODL to improve its access as the region seems to be one of the hardest hit by the acute problem of low enrolments to higher education. Well known ODL institutions today include the Open University of UK (OUUK), Zimbabwe Open University (ZOU), Open University of Tanzania (OUT), University of South Africa (UNISA), Indira Ghandi National Open University (IGNOU), Botswana College of Distance and Open Learning (BOCODOL), Namibian College of Open Learning (NAMCOL) and Open University Mauritius (OUM). The majority of ODL institutions in Africa use mainly print to offer their instruction. Others, however, have started the use of technology to augment their print materials. This, however, cannot match ODL institutions in Europe and other parts of the developed world as their programmes are mainly either blended or wholly offered online, showing superiority on their use of technology to offer instruction such as Namibian College of Open Learning (NAMCOL), Open University of Tanzania (OUT) and Kigali Institute of Education (KIE). This means that such institutions – which include Herzing in the USA, Queensland in

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Australia, IE in Spain, Tallinn in Estonia, Keele in the United Kingdom, Middlesex in the United Kingdom and Edinburgh in the United Kingdom, amongst others, have a much better reputation compared to most of our African institutions with the same mandate. Since one does not necessarily have to leave one's work place to pursue one's education, many people are enrolling with ODL institutions, (Mphinyane, 1999; Sibomana, 2014; Stewart and Lopes, 2015). Perry (1981) made an observation that one way of studying effectively and conveniently is to use distance learning as it does not require people to take time off work and reduce the gross national product, and does not require capital buildings.

Governments on all the continents the world over, have declared initiatives to guide them in their attempts to focus on education. These initiatives include Education for All (EFA) – 2005 to 2015; Millennium Development Goals (MDGs) – 2000 to 2015; UN Decade of Education for Sustainable Development – 2005 to 2014 and many others not mentioned here. Botswana is a signatory to all these agreements. Peppler-Barry (2000) has argued that EFA, with 164 signatories, emphasises commitment to universal primary education (UPE) which is ten years of basic education. In Botswana this is made up by seven years of Primary and three years of junior certificate schooling. The Dakar signatories have also pledged to offer quality education to all their citizens, especially children and adults from ethnic minority groups. In addition to these frameworks, UNESCO has advocated global implementation for sustainable development, Adeyemi (2008). All these efforts are in line with the belief that for national development to be seen to be on course, people should be developed to enhance the country's human resources. Republic of Botswana (1993, p.19) succinctly encapsulates that *"the nations' major human resource is its people and that investment in their education and training is a necessary condition of national development."* Basaza et al. (2010) further argue that the

> *majority of distance learners enrol in distance education in order to obtain a qualification and/or a promotion. They want to update their knowledge and skills. Some enrol in distance education courses with the attitude that distance education is easy because they can learn at their own pace; however, distance learning requires self-discipline and self-management* (p.88).

This, in my opinion, confirms that the countries' human resources can be developed through ODL. However, despite its great potential to contribute to national development, open and

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distance learning in many developing countries still experiences challenges as most people still prefer conventional schooling. The Republic of Botswana (1994, p.10) made an observation that

> *Out-of-school education is a complex area in view of the wide variety of client groups it caters for. The current situation reveals that the various providers of out-of-school education operate parallel to each other and the quality of the programmes is uneven. This sector lacks the status and recognition it usually enjoys in developed and some developing countries. This sector also lacks a comprehensive policy as it was left out of the Government Paper No. 1 of 1977 with a view to preparing a separate policy which was never done.*

Basaza et al. (2010, p.89) further note that for distance learning to be embraced in countries where it is implemented, *"Lecturers must receive training in on-campus and distance instructional methods and learning strategies. Distance teaching will not be recognised as a profession until it is treated as such and individuals who lecture are required to obtain training and to receive some form of certification."* This may improve quality in the provision of ODL which could encourage positive attitudes to distance education. Well trained distance education tutors have to be able to meet the demands of learning objectives. Learning objectives are statements *"that tell what learners should be able to do when they have completed a segment of instruction ... Learning is a cognitive process that leads to a capability that the learner did not possess prior to instruction"* (Smith & Ragan, 1999, p.84). Objectives assist the instructional designer as they *"provide a focus of the instruction, guiding the designer in making decisions about what content should be included, what strategy should be used, and how students should be evaluated"* (ibid). Learning objectives also serve as a focus of communication in a situation where a number of role players are involved in designing instruction, that is, content experts, graphic designers, content editors and others (Smith & Ragan, 1999). These objectives, classified according to the learning outcomes required are discussed further in the next session.

Concept objectives should *"reflect the learners' ability to classify and label ideas, objects and events as examples/non examples of a concept. They may require that the learner state how/why such classification was made"* (Smith and Ragan, 1999, p.86). Examples of verbs for concept objectives include identify, explain and give examples (ibid). Smith and Ragan

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(1999, p.86) further state that principle objectives *"should reflect the intention that the learner can use the principle to predict, explain, or control something. The objectives may require that learners explain their application of the principle ... these are high order learning objectives as they may ask leaners to recognise whether a rule was correctly or incorrectly applied, and tell why or why not."* Examples of verbs for principles are identify and manipulate to create equivalent settings.

Procedure objectives involves using verbs such as adjust, solve and many others *"describe what learners can do to demonstrate that they successfully completed a procedure defined by a procedural rule"* (Smith & Ragan, 1999, p.86). Problem solving objectives use verbs such as assess, determine and synthesise to reflect the procedure required by the learner while psychomotor objectives facilitate development of psychomotor skills and they mainly reflect what new activities are required, for example, number of words per minute that a learner can type (Smith & Ragan, 1999).

Smith and Ragan (1999) are also of the view that when designing or developing ODL study materials, designers should adhere to five categories of possible learning outcomes. Smith and Ragan (1999) put it their way that *"declarative knowledge objectives need to reflect whether learning will be recognition, for instance, choosing from given options, or recall, verbatim or paraphrased, and listed or summarised"* (Smith & Ragan, 1999, p.86). They gave the following as examples of declarative knowledge objectives: match, summarise, define, list and describe**.** Declarative knowledge is similar to Bloom's level of recall and understanding and declarative objectives here *"require a learner to recall in verbatim, paraphrased, or summarised form of facts, lists, names, or organised information. Learners are not required to apply the knowledge that they have acquired but merely to recall, recognise, or state it in their own words"* (Smith & Ragan, 1999, p.66). Intellectual knowledge of skills, unlike the declarative knowledge, is similar to Bloom's levels of application, analysis, synthesis and evaluation. It is here that students *"learn how to not only recall, but also apply knowledge to instances not encountered during instruction,"* (ibid). An example of intellectual skill is given as discrimination skill by Smith and Ragan (1999) and shares that it involves acquisition of concepts which help learners to simplify the world (ibid). Cognitive knowledge represent changes in cognitive capability (Smith & Ragan, 1999). Smith and Ragan (1999) warn that designers of ODL study materials should avoid ambiguous terms such as *understand*, *be aware of*, *appreciate* and *become familiar with*,

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when developing materials. Cognitive strategies, according to Weinstein and Mayer (1986) in Smith and Ragan (Eds., 1999), maintain that here are five major categories of cognitive strategies. Rehearsal strategies are *"used for basic learning tasks and complex learning tasks that aid in selection of information to be recalled and enhance retention of that information,"* Smith & Ragan, (Eds., 1999, p.68) while elaboration strategies are used to introduce basic learning tasks and complex learning tasks that link the new information to what is already known by learners. Smith and Ragan (1999) explain that organisational strategies are *"used for basic learning tasks and complex tasks that select information to be retained and define the relationships among this information so that it may be integrated into memory"* (p.68), while comprehensive monitoring strategies, also called meta-cognition, involves *" … students' knowledge about their own cognitive processes and their ability to control these processes by organising, monitoring and modifying them as a function of learning outcomes"* (ibid). Affective knowledge is facilitated by affective strategies. Affective strategies are those that learners can use to facilitate attracting and sustaining concentration. These strategies can thus, be used to help eliminate learners' anxiety and maintain motivation. The cognitive strategies objectives, according to Smith and Ragan (1999), require the learner to assess, select and invent, apply and modify. These can facilitate high order thinking, and deep learning.

Attitudes, like cognitive strategies, *"influence learning across content and domains. An attitude is a mental state that pre-disposes a learner to choose to behave in a certain way"* (Smith & Ragan, 1999, p.68). Attitude objectives include verbs such as *"… choose to solve …, decide to attend … and must reflect what the learner must do to demonstrate the acquisition of an attitude. They may also require that the learner tell why the performance is important"* (Smith & Ragan, 1999, p.86).

Gagné (1985) in Smith and Ragan (Eds., 1999) describes attitudes as having cognitive, affective and behavioural components that interact, and indicates that attitudes can influence the choices that learners make. He gives an example of a learner who hates Mathematics, who may choose to avoid all courses that have a Mathematics component in them. Instructional designers should be encouraged to deliberately design components into their materials that can encourage positive attitudes. These positive attitudes towards learning can be inculcated in the learning objectives guiding the course developers.

2.3 Theoretical frameworks: Cognitive Load Theory and Theory of Instructional Design

My study looked at some related factors that I considered important in the design, development and delivery of effective ODL materials that encourage learner satisfaction, motivation, retention and academic progression. I first discussed learners' perceptions and experiences about ODL and the type of materials they were using. It is important to note that in Botswana most, if not all ODL learners have initially been exposed to conventional classroom teaching at some point in their lives. As such, when they join ODL they come with all sorts of perceptions and expectations. The experience of ODL to many comes as a "shock" since they are used to being taught by teachers in the classroom who facilitate the necessary interaction and learning processes. Learners, therefore, need to be assisted to "migrate" from the traditional CCL system they have always known to the ODL system which will now be their new mode of study.

Learners need to be advised that in ODL, learning is in their hands as there will be no teacher physically present. They need to be convinced that the teacher is "within" their instructional materials. Since the teacher will not be physically present as was the practice at the conventional schools, different learners will move at a different pace depending on how fast one comprehends the content. Understanding the content depends on a number of factors that include the style of writing, language used, examples given, illustrations, friendliness of study materials, appropriateness of study materials and accuracy of study materials. The main issue in ODL, however, is that learners need to appreciate the differences between the two modes of delivery: conventional classroom learning and open and distance learning systems.

In most ODL institutions of developing countries, printed study materials are the major means of instruction. This means that the ODL learners interact with the print study material more than any other media, hence print materials become determiner of ODL learners' acquisition of knowledge, progression and academic success. This then remains a challenge to developers of these material, as observed by Kumar (2000), to create materials that arouse interest, offer summaries and offer more open layout. Kumar (2000) postulates that ODL materials should be self-explanatory to allow learners to go through them without much external support. This is even more relevant for institutions like BOCODOL which has learners whose competence in English, the language of instruction and interaction is very

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low, and hence find it difficult to work through courses unsupported. Content should be supported by simple and culturally relevant examples and explanations to make it easy for learners to understand. This is important for learners to adequately understand the content as even some of the tutors themselves lack adequate linguistic competence, especially in remote areas, making it even more difficult for learners to understand. At times, tutors use the vernacular to teach yet the content is itself written in English and learners are expected to answer questions in English during examinations (Seeletso, 2011).

As already discussed, ODL has been transformed and materials used now need to be attractive and effective to the user to encourage retention and even motivation for learners to continually use them. To develop these attractive and effective materials, there are theories and models of instructional design that material developers could use. COL (2005) defines instructional design as the practice of arranging media (communication technology) and content to help learners and teachers transfer knowledge most effectively. Silber (1977) views instructional design and development in distance education as a

> *systematic approach to the design, production, evaluation and utilisation of complete systems of instruction, including all appropriate components and management patterns for use at a distance ... The result of instructional development in distance education as a professional activity is the production, usually by a content specialist and a developer, of teaching material appropriate for distance teaching* (p.81).

Silber's view resonates well with Parer (1989, p.82) who postulates that instructional design and development is

> *concerned with understanding, improving and applying methods of instruction. As a professional activity carried out by professionals in instructional development it is the process of deciding which methods of instruction are best for bringing about desired changes in student knowledge and skills for a specific course content and specific student population.*

COL (2005); Silber (1997) and Parer (1989) arrived at a similar view that instructional design is all about developing appropriate content that can lead to effective learning. They all consider a content specialist to be central in the content design and development process. This is the ideal situation for an ODL context – that content design and development should

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not be compromised by using material developers who are not experts in the area. The process of instructional design consists broadly of determining the current state of the learners' understanding, defining the end goal of instruction, and creating some media-based "intervention" to assist in the transition. This approach calls for a step-by-step process to evaluate the learners' needs, the design and development of training materials, and the evaluation of effectiveness of the training intervention. Most instructional design models involve the process of analysing learner profiles and goals; the development of a delivery system to meet the learner profiles; the development of content; piloting the content and evaluating and refining the materials as necessary (COL 2005).

In this study, I continue the discussion by considering how ODL materials could be developed for both developed and developing contexts. The starting point was to identify an appropriate theory of instructional design that I could use to inform my study. The main theory I considered to explain the development of effective and appropriate ODL materials was Sweller's Cognitive Load Theory. I proceeded by investigating the design and development of ODL materials, using factors that are closest to the learner such as language, culture and environment. I explored how the Theory of Instructional Dialogue could facilitate dialogue and interaction in ODL study materials. In ODL, interaction can facilitate active learning, learner motivation, satisfaction, retention and academic progression. The Theory of Instructional Dialogue was developed by Gorsky, Caspi and Trumper (2004). These theories are discussed along-side the ADDIE model which is critical in developing interactive ODL materials that can facilitate both learner motivation, retention, knowledge acquisition and progression. I have also opted to use the Cognitive Load Theory and Theory of Instructional Dialogue in the evaluation of the BGCSE materials I used in my study. These theories also informed my data analysis as well as interpretation of findings.

2.3.1 Cognitive Load Theory (CLT)

According to Paas, Renkl, and Sweller (2003), Cognitive Load Theory originated in the 1980s and underwent great development and expansion in the 1990s. Cognitive Load Theory provides a framework for investigations into cognitive processes and instructional design. Chaudhry (2004, p.36) refers to the cognitive load as *"the term commonly used in the field of education to describe the amount of work imposed on working memory."* Ayres and Paas (2014) posit that *"The main goal of cognitive load theory is to optimise learning and complex*

tasks by efficiently using the relation between the limited working memory (wm) and unlimited by long term memory, LTM. To achieve this goal, cognitive load researchers attempt to engineer the instructional control of cognitive load by designing methods that substitute productive and unproductive working memory load. This allows CLT to make problematic strategies more effective" (p.192). This is corroborated by Chipperfield (2006) who explains cognitive load as "*the total amount of cognitive activity imposed on working memory at an instance in time. The major factor that contributes to cognitive load is the number of items that need to be attended to*" (p.5-6). Van Gerven and Pascal (2003) reiterate that Cognitive Load Theory is "*an instructional theory that starts from the idea that our working memory is limited with respect to the amount of information it can hold, and the number of operations it can perform on that information*" (p.65). The same scholars further advise that learners should be encouraged to use their limited working memory efficiently, especially when learning a difficult or more challenging task, a view supported by Zhang (2013). From the arguments on Cognitive Load Theory already discussed, one can, therefore, deduce that good instructional or study material would facilitate learning. This can only happen if learner profiles are available for material developers to be able to appreciate how much work they need to give to learners at any given time, as well as how much learners already know about the content they have to be taught.

Cooper (1998) points out that instructional writers need to recognise the role and the limitation of working memory to help develop quality instruction, and need to find ways to help maximise the working memory. Ayres (2006) advises that "*the key aspect of the theory is the relation between long-term memory and working memory, and how instructional materials interact with this cognitive system*" (p.287). The cognitive domain supports processing of information during the learning process. Paas, Renkl, and Sweller (2003) noted that cognitive load is used in cognitive psychology to illustrate the load related to the executive control of working memory (WM). Zhang (2013) and Paas, Renkel and Sweller (2003) came to the conclusion that during complex learning activities, the amount of information and interactions that must be processed simultaneously can either under-load or overload the amount of working memory one possesses. All elements, therefore, need to be processed before meaningful learning can continue. One can justifiably argue that it would be very difficult to process information if a learner gets exposed to content in a short space of time. This would mean that the learner's working memory is overloaded with information that can not be processed by the mind at that point in time.

Most instructional strategies are geared towards improving learners' acquisition of knowledge satisfaction, motivation and academic progression. Zhang (2013) contends that these strategies, therefore, could be used to reduce cognitive load. This means that for some text to be understood, it should have fewer words and should be presented in smaller manageable chunks. The media should also be integrated to facilitate easier understanding of content. For instance, there should be efforts to use audio along-side printed text to facilitate easier comprehension of content. CLT also takes cognisance of the fact that the human mind has capacity to hold only a certain amount of information, and should therefore, not be overloaded with information (Chipperfield, 2006; Sweller, Van Merrienboer and Paas 1998;Van Gerven and Pascal, 2003). This then explains the belief and thinking that learners' performance drops if cognitive load is either low (under-loaded) or high (overloaded). Tiegen, (1994) and Wulf and Shea (2002) arrived at a similar observation that where there are conditions of both under-load and overload, learning may cease to take place. Chaudhry (2004) has seen the same phenomenon as he observes that overload of the working memory undermines the students' capacity to process information effectively and therefore undermines their ability to learn. When the ability to learn is hampered, the understanding of what is being taught can be severely compromised. For instructional designers who wish to integrate media in their study materials, Chaudhry (2004) suggests that it is important to consider several factors that affect the learners' cognitive load. These factors include the following:

- complexity of the learning content
- rate of presentation of information
- ability of learners to control the rate of presentation
- familiarity of the learner with the content
- instructional methods used to teach the content.

Chaudhry (2004) contends that by attending to these issues and taking precautions to evaluate and measure the cognitive load of each element applied to course materials, it is possible to reduce cognitive overload and thus manage effectiveness of study materials. Chaudhry (2004) goes further to explain that according to the principle of Cognitive Load Theory, there is a limit to the amount of information that can be used, processed and stored by the working memory and overloading. Cognitive Load Theory, according to Chaudhry (2004) is principally concerned with the way in which a learner's cognitive resources are

focused and applied during any learning or problem-solving exercise. As such, he is also of the opinion that for instruction to be effective, the mind's capacity for processing information should not be overloaded. Instructional designers, therefore, need to consider that the human mind has only a limited capacity to process information in the working memory at any given time (ibid). Sweller (2003) writes that Cognitive Load Theory has many implications in the design of learning materials which must, if they are to be effective, keep the cognitive load of learners at minimum during the learning process. There are different types of cognitive load theories that have various functions regarding understanding of learning. These are discussed below.

Types of cognitive load

There are three types of Cognitive Load: intrinsic cognitive load, extraneous cognitive load and germane cognitive load. Learners' cognitive load may vary due to these loads or demands. Whereas extraneous cognitive load interferes with learning, germane cognitive load enhances learning (Paas et al., 2003). Intrinsic and germane cognitive loads demand that distance learners should be presented with realistic tasks. One should, however, take cognisance of the fact that when dealing with complex areas, realistic tasks presented to learners with only limited schematic knowledge are likely to impose a heavy cognitive load. This is corroborated by Paas et al. (2003, p.7) who state that *"tasks presented to novices should differ from those presented to more knowledgeable learners."* Sweller (1999) concurs with this view and further points out that when developing study materials, designers need to be cognisant of learners' cognitive load during learning. He advises that the lesson should be designed so that the amount of cognitive processing required for learning at any one time does not exceed the learners' processing capacity.

Paas et al. (2003, p.1) argue that the **intrinsic cognitive load** is the engine of the cognitive load *"because demands on working memory capacity imposed by element interactivity are intrinsic to the material being learned,"* while Zhang (2013) explains that intrinsic cognitive load is determined by the complexity of learning task, learners' knowledge and interactions between the two factors. In ODL study materials differ in their levels of interactivity. However, Paas et al. (2003) postulate that these materials cannot be manipulated to make them any simpler as they may affect effective learning. The cognitive theory is associated with difficulty of instructional materials. Paas et al. (2003) and Zhang (2013) reached a conclusion that only a simpler task that omits interacting elements can be chosen to reduce

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this type of load. They further warn that the omission of essential, interacting elements will compromise sophisticated understanding but may be unavoidable with very complex, high element interactivity tasks. Subsequent additions of omitted elements will permit understanding to occur as it allows for sequencing and arranging difficult content to make it easier to learn and understand. This involves breaking concepts into smaller chunks called sub-schema, then teaching them in isolation for easy comprehension, before explaining and describing them as whole unit (Kirschner, Sweller, and Clark, 2006). Kirschner et al. (2006) observe that all instruction has inherent difficulty associated with it which may not be modified by an instructional designer or materials developer. In their view, DeLeeuw and Mayer (2008) concur that intrinsic cognitive load *"is essential for learning to occur. It largely depends on the complexity of materials, namely the number of interacting elements that must be kept in mind at any one time."* (p.223). Simultaneous processing of all essential elements must occur eventually despite the high intrinsic cognitive load because it is only then that understanding commences. Paas et al. (2003) note that in essence, the intrinsic load is imposed by the number of elements and their interactivity.

Extraneous cognitive load on the other hand is described as the by-product or end result of how instructional materials are designed and delivered to learners. Extraneous cognitive load, also known as invalid load, is caused by improper instructional design and development of materials Zhang (2013). This is a view is corroborated by Kirschner et al. (2006) who explain that extraneous cognitive load is generated by the manner in which information is presented to learners. They further point out that this is under the control of instructional designers, and can largely be attributed to the design of the instructional materials. The scholars go on to credit the use of different ways to explain an item to facilitate understanding. An instructor can verbally explain any object, e.g. a square, but will always take a much shorter time and far less effort when the instructor actually shows the learners a real square. In such instances, the efficiency of the visual medium is preferred, Bjork (1994); Diemand-Yauman et al. (2010); and Kirschner et al. (2006).

Extraneous load results from techniques in which the information to be learned is presented. Chipperfield (2006) is of the view that extraneous cognitive load does not contribute to learning and reaches a conclusion that it can be modified by instructional design. He argues that extraneous cognitive load can be changed using a variety of techniques for the information to be learned or using relevant aids and providing specific learning instructions.

Kirschner et al. (2006) and Bjork (1994) makes the same observation that **germane cognitive load** is devoted to the processing, construction and automation of schemas. This is when cognitive load researchers look for ways to re-design instruction to re-direct it to be extraneous load. This would later be focused toward schema construction, what will now become germane load. Germane load, according to Chipperfield (2006, p.2) *"helps build new complex schema in a successive manner helping the learner to move from novice to expert. It is a self-effort to learn, and memorise information learned."* Paas et al. (2003) postulate that CLT assumes that limited capacity working memory becomes effectively unlimited when dealing with familiar material, previously stored in a long-term memory holding many schemas that vary in their degree of automation. Paas et al. (2004, p.6) further argue that

> *cognitive load theory has many implications for the design of learning materials which must, if they are to be effective, keep the extraneous cognitive load as low as possible during the learning process. However, freeing cognitive capacity by reducing extraneous load is not a sufficient condition for instructional conditions to be effective. At the same time, leaving materials should be presented in such a way that germane load is as high as possible*

The theorists further remark that *"… learning conditions are often compared with respect not only of learning performance but also to the mental effort that was involved while learning"* (p.7). Sweller, Van Merrienboer, and Paas (1998) posit that the cognitive load theory has been designed to provide guidelines intended to assist in the presentation of information in a manner that encourages activities that optimise intellectual performance. They also contend that the intrinsic aspects of cognitive load can be reduced by the scaffold of simple to complex sequencing, where as *the "extraneous aspects can be reduced by providing the substantial scaffolding of worked examples initially, followed by completion problems and then full problems"* (p.3). This view is corroborated by Paas et al. (2003) who suggest two forms of scaffolding to take into account when considering alterations in cognitive load that occur with experience. They argue that the intrinsic aspects of cognitive load can be reduced by the scaffold of simple-to-complex sequencing, whereas the extraneous aspects can be reduced by providing the substantial scaffolding of worked examples initially, followed by completion problems and then full problems.

Van Merrienboer (1997) suggests that there is a need to reduce intrinsic load to prevent excessive load. This he does by proposing that learners should be given simpler tasks by omitting some of the interacting elements. However, he warns that elimination of some elements may partially compromise the learners' full understanding of the intended content. Van Merrienboer (1997, p.2) advises that *"instructional designers should integrate target group analysis with knowledge analysis (hierarchical analysis of the material to be learned) when designing instruction, so that the knowledge can be communicated to the learners at the grain size."* Paas et al. (2003) name the use of worked examples rather than solving equivalent problems as one of the earliest and probably the best known cognitive load reducing techniques. Chipperfield (2004) supports Paas et al. (2003) and Van Merrienboer's (1997) views of reducing intrinsic load to facilitate understanding and suggests that the limit of working memory can, in fact, be extended if recording or chunking were to occur. Chipperfield (2004) goes on to explain that chunking involves the learners taking their prior learning and using solution steps of isolating, grouping, simplifying and checking, and organising the incoming information into this schema.

An instructional designer can attempt to limit the amount of extraneous load and build instructional presentations and activities that encourage germane load and schema formation to take place. The main instructional design objective, therefore, is to increase the germane load and to reduce the extraneous load. This means that the more extraneous load, the less room for germane load. Chipperfield (2006) points out that the intrinsic cognitive load depends completely on the complexity of the information or content to be learnt. He **further postulates** that it is the memory required by the thinking task at a given time that measures the amount of the working memory in use due to the interactivity of the amount of information being processed. He, however, cautions that this cannot be modified by instructional design. This, in my view, suggests that instructional designers should not develop easy content so that learners can easily pass because in this way learning would not have taken place. Instead, they should develop content that will lead to low cognitive load but at the same time not compromising quality. Instructional designers need to develop instruction without unnecessary, extra content that can hinder effective learning. Content of ODL materials need to be simple for the learner to be able to interact with and understand them even when studying alone. When difficult content is given to learners to study, then their intrinsic load will be high, as well as the extraneous cognitive load. When both the intrinsic and the extraneous demands are high, then the total load will exceed mental

resources and learning may fail to occur. Material developers need to modify instructional materials to facilitate a lower level of extraneous cognitive load that will facilitate and support learning. This could only be possible if the resulting total cognitive load falls to a level that is within the bounds of mental resources. Excessively high levels of cognitive load may result directly from the instructional materials presented to students. If this happens, then re-designing instructional materials to reduce the levels of extraneous cognitive load may be necessary.

Paas et al. (2003) consider the three cognitive loads to be additive in that, taken together, the total load cannot exceed the memory resources available if learning is to occur. In other words, **intrinsic + extraneous + germane (should not exceed) the memory resources available.** If too much information is provided learners will not understand the content, hence effective learning will not take place. Cognitive schemata facilitate transfer of performance of acquired knowledge. Van Gerven and Pascal (2003) define cognitive schemata as information structures in long-term memory that enable someone to solve certain problems and at the same time save working memory by chunking information elements and production rules into a whole. Kearsley (2006) is of the view that cognitive load theory can best be applied in the areas of instructional design of cognitively difficult and technically challenging material. If an instructional designer, for instance, wants a learner to know names of cities and towns in different districts of Botswana, the instructional designer can minimise the amount of information presented at one time through chunking, grouping and using visual cues and prompts that can assist easier understanding of content to reduce cognitive load.

Cognitive Load Theory further advances the fact that attention must be focused by using boxes, bold facing, underlining, bulleting of textual information and other means. Learners could also employ learning strategies such as creating mental images of the content, and taking particular kinds of notes, or even using a certain kind of mnemonic (Smith & Ragan, 1999). Smith and Ragan (1999) further argue that learners should also be given an opportunity to practise so as to elicit response. This means that *"learners are given the opportunity to interact with the material being learned and see if they are ready to proceed to the next part of the lesson. Some learners can and will spontaneously generate problems and questions that "test" their understanding of the content of the lesson, and whether they are achieving the identified or their generated learning goals"* (p.118). Giving learners more practice makes them active participants in the learning process, and not just passive

observers. This practice will also inform the tutor if any further intervention is necessary or not. When learning has taken place, the ODL tutor needs to summarise and close the lesson. This can be done during a face-to-face contact session as learners would have worked on their own for the most part of the lesson. Smith and Ragan (1999) conclude that how the tutor closes the lesson will impact on how well learning would be retained, and how prepared learners would be for the next lesson.

Kearsley (2006) advises that when designing an instructional study materials the following strategies could be considered to reduce the cognitive load of the text:

- using large type sizes
- using clear layouts
- clarifying text by examples that should be familiar to the learner
- summaries

Smith and Ragan (1999) have seen the same phenomenon that cognitive overload can lead to emotional frustration of a learner. To avoid this, they reached a conclusion that difficult concepts can be simplified by using metaphors in designing instruction, and the use of illustrations and images that associate with the content. They further put forth two main cognitive strategies: those for learning and those for thinking. Those for learning are mental tactics for attending to, organising, elaborating, manipulating and retrieving knowledge, while those for thinking are mental tactics that lead to strategy, invention or creativity. Affective domain, as defined by Smith and Ragan (1999), has to do with self-motivation that may result in active participating in a learning task, as well as maintaining the zeal and interest in the learning process. Cognitive strategies that support learning are also called learning strategies and should be encouraged by instructional designers. Learning strategies, according to Gagné & Driscoll (1988) and Davidson (1988), are tactics employed by learners to guide their own processing, rather than having the processing guided or provided by the instruction.

I have discussed the Cognitive Load Theory and how it could facilitate development of interactive, easy-to-understand learning materials. The next section discusses the Theory of Instructional Dialogue. This theory helps bring dialogue to the material. This "dialogue" in

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text could facilitate interaction and learners would not feel isolated as they would feel the "voice" of the tutor conversing with them from within the materials.

2.3.2 Gorsky, Caspi and Trumper's Theory of Instructional Dialogue

Distance learners should not miss conversation of face-to-face set up in their study materials. Rowntree (1990) suggests that ODL material developers should write their materials as if they are sympathetic tutors. Learners should be able to interact and understand their materials with no or very little assistance from the tutor. Rowntree (1990) contends that this conversation can be placed in the study materials by using visuals, activities and feedback, together with the use of conversational pronouns such as "I" and "we" as if one is addressing learners in person. The Theory of Instructional Dialogue was propounded in 2004 by theorists Gorsky, Caspi and Trumper. They view learning as an individual activity mediated by interpersonal dialogue (Gorsky, Caspi, and Smidt, 2007). The theorists argue that words used in print study materials, which in ODL determine learner progression and ultimately, success, are critical to learners' understanding of the content. Gorsky et al. (2007) are of the view that of all the features that contribute to successful ODL, dialogue, both oral and written, should be facilitated by both structural and human resources. They view structural resources as materials that learners may use to facilitate their own learning. This may include the different media, facilitators and even peers. This theory, however, takes for granted that all distance learners will have access to all these resources, but for developing contexts some learners study in isolated settings with no access to some of the mentioned resources.

Intrapersonal dialogue involves a learner studying alone using resources such as self-instruction texts. It also involves, as in the words of Gorsky and Caspi (2005, p.139) *"mental processes engaged in by students as they purposely try to learn ... when students read self-instruction texts, listen to lecturers or audio-tapes, view educational films, solve problems, manipulate computer simulations, they are said to be engaged in intra-personal dialogue."* Intrapersonal dialogue, therefore, has features of individual study. The human resource here is the distance learner. The other type of instructional dialogue identified by Gorsky, Caspi, and Smidt (2007) is **interpersonal dialogue**. In this type of dialogue, there are many human resources involved such as the individual learners, facilitators as well as other learners. Interpersonal dialogue takes place between people; a learner can consult with other learners or can consult with her or his facilitator for help. Interpersonal dialogue is most evident during face-to-face interactions. It involves two or more people working on a common

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activity or number of activities and can thus facilitate and encourage learning. Interpersonal dialogue can also take place using mails or telephone conversations. What is worth noting is the fact that in instructional dialogue there should be a resource to support the dialogue. These resources will also help bring out the desired learning outcomes, as observed by Gorsky et al.(2007).

From the literature one can then summarise the resources and the instructional dialogues they facilitate as captured in the table below.

Table 2: Resources and instructional dialogue

Resource	Type of dialogue facilitated
Structural resource, such as print study materials	Intrapersonal
Structural resource, such as discussion group	Interpersonal
Human resource, such as discussants in a group	Interpersonal
Structural resource, such as tutor marked assessment done at home	Interpersonal
Assessment submitted to tutor for marking, marked, graded and returned to learner with corrections to help learner learn from her or his mistakes	Interpersonal
Student reads tutor's comments	Intrapersonal

Adapted from: Gorsky et al. (2007)

Gorsky and Caspi (2005) state that in ODL *"every element is viewed as a dialogue or as a resource that supports dialogue."* The key element that is central to instructional dialogue is learning, as well as the mastery of content that will take place. In ODL, for this learning and mastery of content to take place there should be dialogue which is enabled by resources. The part of the study that follows summarises resources that facilitate learner dialogue and factors that determine them. **Student – student dialogue potential** is captured in the table that follows.

Table 3: Student – student dialogue

Resource	Low potential	High potential
Instructional design	Recorded lecture. The learner here is passive	Live session where there are discussions and question and answer sessions. This is highly interactive
Group size	300 learners per group; minimum interaction	5 learners per group. Maximum interactivity with facilitator
Contact session with facilitator available	1 hour per month	2 hours per day for 3 days a week; will facilitate frequent interaction

Adapted from: Gorsky and Caspi (2005)

Instructor – student dialogue potential is summarised as captured in the table below.

Table 4: Instructor – student dialogue

Resource	Low Potential	High Potential
Instructional design	Individual assignment	Collaborative problem Based learning
Group size	5 learners per group	500 learners per group
Learner accessibility	Learners' e-mail addresses, contact numbers but without web based media.	Learners' email addresses, phone numbers provided, plus web-based synchronous and asynchronous forums.

Adapted from: Gorsky and Caspi (2005)

Having discussed the Theory of Instructional Dialogue, one can then conclude that facilitators and learners are important resources to encourage learning as they both have the potential to initiate and maintain effective dialogue. Instructional dialogue, irrespective of resources involved, is normally geared towards giving achievement, satisfaction and positive results. Dialogue in ODL is always used to increase learner understanding, satisfaction or both, but this is not always the case due to various challenges like big class sizes during face-to-face sessions, and the language used during teaching and learning process.

The table below serves as a summary of the different types of dialogue and resources that may facilitate them:

Table 5: Types of dialogue and their resources

Activity	Structural resource	Type of dialogue
Student reads a self-instruction text	Self-instruction text	Intrapersonal
Student seeks help by posting a message in an asynchronous discussion group. One student responds and helps	Discussion group	Interpersonal
Student calls another on the phone. They discuss the weather and make plans to go out	Having telephone numbers of fellow student The two students' conversation	Interpersonal social dialogue.
Facilitator uses only lecturer method to teach – no questions, no discussion	Verbal presentation, which can be equated to instructional text or a video cassette playing	Intrapersonal
Face-to-face tutorial session led by the facilitator who encourages discussion and question asking	Tutorial session	Both intrapersonal and interpersonal dialogues.

Adapted from: Gorsky and Caspi (2005)

It is important to note that some students can display various types of dialogue at one particular time. For instance, one student can attend a lesson and listen attentively, but without actively participating in the discussion. This type of learner will utilise the resource for intrapersonal dialogue only. He or she would not have utilised the human resources, being the instructor and fellow students to facilitate interpersonal dialogue. However, the other learner may attend the same tutorial and in addition to being present, he or she may listen very carefully, then ask the facilitator questions where he or she was not clear. Such a student would have utilised both intrapersonal and interpersonal dialogue. What then becomes

obvious is the fact that more learner involvement will lead to high intrapersonal dialogue. This is in line with Holmberg (1995) assertion that *"conversation is brought about by the presentation of study matter, and this one way traffic causes students to discuss the contents with themselves. The conversation is both real and simulated. Simulated conversation is internalised conversation caused by the study of a text ..."*.

As mentioned earlier, interaction remains an important part in the successful delivery of ODL programmes. This interaction could be among learners themselves, learners with tutors or learners interacting with their study materials and could happen through various ways such as tutorial sessions, or through assignments and getting written feedback. During interaction among learners, they benefit from the realisation that other people's values and beliefs and experiences lead them to see things differently, as observed by (Rowntree, 1990). In instances where contact with either the tutor or other learners is not possible, study materials have to be designed in such a way that they fill the gap and compensate for the missing human aspect. Dialogue should be evident in the learning materials. Rowntree (1990) suggests that material developers must put what might be said to the learner face-to-face on paper and avoid all words that you would avoid during conventional teaching. This would go a long way in helping learners in some remote and rural areas of developing countries. Teaching and learning strategies for ODL should be able to close the distance gap between the learner and the facilitator, and this can be done by using the Theory of Instructional Dialogue to guide in the design and development process of the study materials.

During interaction with the tutor, either during face-to-face sessions or through assignment feedback, it is important that learners are exposed to skills such as reading, listening and speaking that will further assist them in their understanding of content. For a subject like BGCSE English, for instance, during face-to-face sessions learners can always be made to read loudly for the tutor to assist them with pronunciation. This skill will help during examinations where there is a listening comprehension. This activity involves the invigilator reading a passage to learners who will, thereafter, be given questions related to the passage read to them. The invigilator needs not be necessarily the students' tutor, but they would have to be familiar with the material tutored and the accent should be clear to be heard by learners, especially during examination time. Though Krashen (1994) is of the view that one-way comprehensible input is sufficient to facilitate language acquisition, scholars such as

Pica (1994) and Long (1985) place greater emphasis on conversation interaction. Lightbrown and Spada (1999) borrow from Vygotsky's socio-cultural theory of human mental processing and argue that language learners gain proficiency when they interact with more advanced speakers of the language, for example teachers and peers. Scaffolding structures such as modelling, repetition and linguistic simplification used by more proficient speakers are believed to provide support to learners, thus enabling them to function within their zones of proximal development Vygotsky (1962). Further understanding of learning by ODL learners is explained by Creed and Koul (1993) through the integrated model which calls for, among other things, the use of illustrations and repetition.

Distance learners need to be nurtured as they are a very "fragile" group. These learners can drop out of their programme of study before completing their programme of study due to a number of factors that include the following:

- failure to fully understand content
- failure to "connect" with the information taught due to unfamiliar examples
- achieving poor grades
- discouraging tutor feedback.

Assessment and feedback in ODL

Academic performance in ODL can be established by both assignment marking and feedback, as well as tests and examinations. Distance learners also appreciate written assignment feedback. This will be discussed in detail later in Chapter 4 of this study. A number of factors, in addition to the type of feedback the learners are provided with, are considered critical in motivating distance learners. This includes using language and examples that learners can easily relate with, as well as the quality of study materials. The other factor that is important in the successful implementation of ODL is for institutions to adequately train their human resources. This is in line with Basaza et al. (2010) who contend that

> *Some tutors have obtained guidance about how to teach in a face-to-face setting, but very few have experience with distance education instruction and learning strategies. Their inadequacy is reflected in the lack of quality distance learning materials, and the lack of student support. Students are frustrated with this lack of support, but they are also challenged by the mode of delivery – print*

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Distance learners need academic guidance and emotional encouragement to assure them that they are doing the right thing and what is expected of them. This could be done through comprehensive feedback on activities. Over and above the feedback, which is done through written comments, guidance and counselling has to be provided to distance learners through "pen and paper." All the necessary words of encouragement and motivation have to be done through written feedback. This could be in the form of tutorial letters. In conventional classes, the teacher talks to her or his students regarding their performance and how they should improve their performance. Rowntree (1990, p.302) postulates that *"formative assessment helps form the learners' learning ... summative assessment sums up what each has achieved."* Formative assessment, according to Rowntree, uses activities such as self-assessment questions *"in order to help the learners monitor and develop their own learning. This may involve getting feedback from colleagues – peer assessment"* (ibid). In ODL institutions, learners are occasionally given assignments that are then marked by a tutor. These are usually meant to establish their level of understanding of the content as well as their readiness to sit for the national examination. Summative assessment mainly *"reports, or puts on record, what is known of learners' attainments, for instance what they have studied, and how they performed in their study"* (Rowntree, 1990, p.303). The most obvious intention of giving summative assessment is to establish what learners have achieved, and not necessarily to give them feedback that would help them learn better.

Assessment in ODL is important as it can help *"reveal the learners' strengths and weaknesses"* (Rowntree, 1990, p.326). As a material developer, one should always be careful not to set questions when not sure of what they are supposed to test. Knowing what the question serves to ask will also assist in knowing the type of questions to set, for instance, be they open-ended, multiple choice, close-ended type of questions or any other. The questions asked should always be linked to the objectives. In-text activities with immediate feedback should be provided for the learner to check if he or she is on the right track while studying. From my experience with distance learners, I know that they very much appreciate constructive feedback on their assignments. They want feedback that will help them understand where they went wrong. The type of feedback with which they are provided is considered critical in motivating distance learners to learn more as it has to account even for lost marks. The feedback should be able to help learners understand why they lost the marks they did so that they can improve in future.

Rowntree (1990) further postulates that in ODL it can never be enough to leave marks unexplained in learners' scripts. He argues that it is not *"sufficient merely to pepper learners' work with ticks and crosses and question marks, underlining or circling a word here and there"* (p.327). This calls for tutors to always account for the marks they award learners. Tutors need to *"draw learners' attention to facts they may have overlooked or misinterpreted,"* (Rowntree, 1990, p.328). This is not to say that tutors should provide learners with answers. It is crucial, however, for tutors to *"suggest alternative approaches to interpretations ... they need to suggest how learners might present their ideas more effectively ... commend the learners for any unexpected insights, special efforts or improvement in competence"* (ibid).

Learners using mainly print materials depend on the type of feedback provided by their tutors to enhance their understanding of the content. Jennings and McCuller (2004) corroborated Herman and Popyack's (2003) view that interacting with distance learners and providing detailed feedback is more time-consuming than face-to-face. This might be true but necessary because in face-to-face, the teacher talks to learners. There is direct dialogue between the learner and the tutor while in ODL the same feedback has to be provided through written notes. The dialogue that takes place when a teacher provides feedback to her or his learners has to be done in writing. This is the dialogue that the Theory of Instructional Dialogue encourages to facilitate effective learning. The voice of the absent human figure needs to be clearly "heard" in the feedback guiding the learners, an assertion also made by (Henrichsen, 2001). Spangle, Hodne and Schierling (2002), Tricker, Rangecroft, and Long (2001), and Young (2006) made a similar claim that ODL learners appreciate detailed feedback and consider it the main determiner of course quality. In addition to the study materials, Tricker, Rangecroft, and Long (2001), and Young (2006) view comprehensive feedback from tutors as the bridge between learners and their academic success. The feedback should advise learners on many aspects of their learning. Rowntree (1990, p.337) contends that "*... tutors' comments should provide suggestions that will help their learners think again about what they have done, and about how they might do differently another time. Tutors' written remarks need to convey what he or she would have had to say if it had been possible to meet the learner face-to-face."* Rowntree (1990) further asserts that tutors should try and help learners remedy the major weaknesses in their studies. Eom (2006) corroborates what Jennings and McCuller (2004) remarked in his argument that feedback

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alone cannot completely satisfy ODL learners. Instead, he argues that responding to learners' direct and specific concerns will be what satisfies them the most.

Even when the learner had not written a good piece, the tutor is encouraged to always be positive to encourage learning, especially at the start of her or his feedback. This shows that the teacher does not only recognise and dwell on learners' faults, but also on their positive aspects (Rowntree, 1990). This also explains the common ODL notion that to motivate distance learners, always "start with a kiss though you may have to end with a kick!" The feedback should be *"turned into positive guidance without sounding either condescending or threatening"* (Rowntree, 1990, p.329). Through feedback learners get to know how they performed on their work, they get praise that can motivate them, they can be reprimanded and advised, and they can improve through recommendations received through feedback.

It is of great importance to discuss the design and development process of ODL study materials, for both the developing and developed contexts. The next part of my study looks at this processes of designing and developing materials. The aim is to establish if there are any similarities or differences between the different contexts.

2.4 Designing and developing ODL study materials

This section of the study looks at designing and developing study materials for an ODL context. The study looks at designing and developing print study materials for both developing and developed contexts, and establishes if there are any similarities or differences during the design and development processes. The design and development of ODL study materials is a process that has to be done by professionals who are also content specialists. This is because the study materials, as the main source of information, will determine the learners' progression and success. In the next part of my study, I discuss the design and development for a developing context.

2.4.1 Designing materials for developing context

Print materials for ODL should be accessible and effective to lead to learners' academic success even with minimal intervention from the tutors or learning support facilitators. Yousuf et al. (2008) have made an observation that

The course design process involves many aspects like identifying the target audience, objectives of the course, availability of funds and other resources. When a course is first conceived and planned, it starts with analysing the students for whom the course is intended, and defining the educational objects (p.124)

Yousuf et al. (2008) observation suggests the need for material developers to know the people there are developing materials for. There is no evidence of this happening in ODL institutions.

Today, ODL needs to be supported by a highly developed learner support system and highly interactive and effective print study materials as well as other media that can enhance teaching and learning. Yousuf et al. (2008) advise that *"a course unit can consist of an overview, unit objectives, several sections of content divided into sub-sections, interactive questions, a summary, self-assessment questions on the whole unit, and a list of additional reading materials,"* (p.124). These have to be informed by the learners' profiles. Yousuf et al. (2008, p.125) further observed that distance education *"should be fully self-contained as the students have no access to libraries or other material. The material should be highly structured and didactic with precise instructions on what the student has to do. The text should have self-assessment questions, illustrations, summary, activities and some bibliography. It should be written in an easy and simple language."* Heinrich, Molenda, Russell, and Smaldino (1993) posit that *"a colour photograph can be a highly iconic visual, capturing much of the reality of the original referment. Visuals can simplify information that is difficult to understand*" (p.112). The same scholars are of the view that, in ODL, visuals *"provide a redundant channel, that is, when accompanying spoken or written information they present that information in a different modality, giving some learners a chance to comprehend visually what they might miss verbally*" (Heinrich, et al., 1993). Yousuf et al. further posit that *"... one of the most effective methods of teaching is through illustrations. Illustrations, like headings and sub-headings, break-up long strings of continuous text. In many cases, a good illustration can replace the text and communicate the desired information more quickly and effectively,"* (Heinrich et al., 1993, p.129). Different types of illustrations make learners relate more with the content and bring topic closer to reality, as observed by (Rowntree, 1990).

Illustrations can help learners with interpretation skills as learners can be encouraged to describe pictures to express the necessary understanding that could not be conveyed in words alone. Some pictures can explain how things look, and even how they work, much better than words. From experience, one can argue that visuals can be used every day for important communication purposes, and it is common for most learners to, according to Heinrich et al. (1993, p.115) *"prefer coloured visuals over black and white visuals. However, there is no significant difference in the amount of learning except when colour is related to the content to be learned."*

Parer (1989) is of the view that when developing print materials for an institution, the course coordinator, or lecturer in some contexts, needs to discuss and agree on the content to be covered with the material developers. They should also develop activities that are suitable for distance learners. The text needs to be organised in such a way that it facilitates easy comprehension of content, for instance, starting with the simple known facts to the more complex unknown ones. Parer (1989, p.141) argues that course development should also be *"concerned with the development of the materials and the quality of text, curriculum content, teaching methods and quality of presentation."* The course coordinator or lecturer *"advises the writer on instructional design and if necessary converts draft lessons to suitable format for distance education"* (p.142). This arrangement is very common in ODL institutions as they mostly use part-time or temporary staff from conventional institutions as writers to develop their study materials. The courses developed need to be sequenced in such a way that they motivate and encourage learning. To facilitate all this smooth development of study materials for distance learners, a team approach should be encouraged. BOCODOL uses team approach for material design and development. The Cognitive Load Theory advocates for relevant content in terms of factors such as language level and cultural diversity and team approach can help facilitate this development. However, at BOCODOL gaps still exist as study materials still offer incomplete content and irrelevant examples as discussed in Chapter 4 of this study. Team approach would include content specialists, audio and video experts, graphic designers or artists, editors and other people that the team may want to involve in the development exercise. This team should then ensure that it places the learner at the centre of the content and needs to *"build active learning into study materials which puts into consideration the needs and autonomy of the learners"* (Parer, 1989, p.190). The course teams, Rowntree (1990) argues, facilitate a number of activities that include sharing of work, which in turn facilitates faster completion of tasks, as well as improved quality as a result of

continued discussions and constructive criticism. The course development team needs to *"write down in advance all the necessary explanations and encouragements that one would be giving almost unconsciously if one were working with them face-to-face"* (Rowntree, 1990, p.35).

It is important to always present text that is highly visible to both capture and maintain learners' attention. Text can be used collaboratively with the use of illustrations. Illustrations are very important as they can be used to explain content that cannot be easily explained in words. In ODL, different types of illustrations can be used to complement text by presenting different meanings. According to Heinrich et al. (1993), illustrations that can be used in ODL include still pictures in the likes of photographic or photograph-like representations of reality, drawings such as sketches, most of which can be used to show relationships or to explain processes that cannot adequately be explained in words alone and figures, which are visual representations of events, activities or relationships (Heinrich et al., 1993). Other illustrations that can be used in ODL to facilitate understanding are graphs, which provide visual representations of numerical relationships and data. Heinrich et al. (1993) posit that there are different types of graphs such as bar graphs, pictorial graphs, pie/circle graphs and line graphs. Posters are illustrations that can be used to attract and sustain attention and to communicate a message, and posters are most of the time used to try and persuade something, ie, behavioural change while cartoons, which are caricatures of real people and events, though used primarily to entertain, can be used to reinforce a point of instruction. These are critical for ODL to complement text and also make it more appealing to learners. It is also important to use multi-media in ODL as it can *"addresses different learning styles. Auditory learners, visual learners, and tactile learners all benefit from multi-media's varied presentation forms,"* (Heinrich et al., 1993, p.242). Learners are at liberty to choose for themselves the best mode of delivery where multi-media is available. Heinrich, et al., (1993) posit that the use of multi-media kits allows learners to manipulate and inspect real objects, thus arousing learners' interests as they are multisensory.

Though Heinrich et al. (1993) encourage the use of illustrations in ODL, Parer (1989) warns that illustrations should not be used just for the sake of using them. He is of the view that they should instead be used to further clarify content and *"they should be self-explanatory to capture the readers' interest"* (p.197). This is a challenge to ODL material development teams to always establish if illustrations are adequate, and if they really explain the theories

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and concepts they were meant to explain. ODL material developers can use illustrations such as graphs and photographs to help explore interpretations of different viewpoints and diversity, as observed by (Sievens, 2000). Sievens (2000) contrasted differences in human beings vis-a-vis conditions, qualities or types. He further explained that this may include young people from a variety of ethnic or cultural groups, and learners who may have special needs as a result of issues of gender, class and religion, extreme poverty, drug dependency and language factors. In-text activities help *"create variety in text so that the student participates actively when studying the lesson"* (Parer, 1989, p.196).

The structural design of materials can also have a major impact on learners' comprehension of materials. The design should be appealing to the learners' eye, for instance the colour should be attractive, illustrations should be clear and relevant to the text and repetition should only be used to show emphasis (Seeletso, 2011). During one of the workshops held for BOCODOL learners and tutors, learners shared that they were motivated by modules that are not very bulky, i.e. had fewer pages and they completed them faster. This view is also articulated by Moore and Kearsley (2005) who observe that for ODL materials to be more effective, they should be organised into short, self-contained segments with frequent summaries and overviews. These will be ideal for the distance learner who is studying alone most of the time. Moore and Kearsley (2005) further warn that ODL study material developers need to use language that learners can understand with ease in the study materials. This is important in distance learning where some of the learners may be studying alone in isolation, with no other resources to use to facilitate understanding or concepts that may be difficult for them. It is crucial that writers need to appreciate that some aspects of content are easily grasped by some learners while others struggle to understand. As such Moore and Kearsley (1996; 2005) advise that ODL authors should arrange content so that easier concepts are introduced first and more complicated ones are studied later. This will encourage learners and motivate them to continue with their studies, a strategy encouraged by the ADDIE model on instructional design.

At BOCODOL it is evident that ODL learners still prefer lectures as in the CCL style of teaching. Many ODL learners would have gone through the CCL system and would not be adequately trained for ODL. This is further discussed in Chapter 4 where learners feel tutors neglect them, unlike in CCL where they had a relationship with their teachers. This trend is in line with the observation of Faux and Black-Hughes (2000) that ODL students prefer to

learn the course content in the traditional classroom setting where they could listen to the content rather than read it. This, therefore, calls for intervention to make ODL more interactive by using various media in the delivery of the content. Use of integrated media such as audio-tapes and radio would be useful in ODL to explain things that print cannot take care of such as pronunciation of words. Audio-tapes are also effective in that learners can replay them at will. A major short coming is the very limited use of integrated media in ODL institutions in various developing countries that include Botswana, Rwanda and India.

Silber (1991); Parer (1989) and Rowntree (1990; 1992; 1997) concur that ODL experts need to consider some factors in the design and development in order to develop effective, highly interactive materials. Phillips (2007) contends that Printed study materials remain a significant media in ODL. This, therefore, means that material developers should structure study materials in such a way that learners can learn and understand content even when studying alone.

Rowntree (1990) advises that material developers should provide in-text activities to break monotony of continuous print. In-text or self-assessment activities will help learners check how much content they have understood as they progress with their study. Self-assessment activities will also facilitate interactivity of materials. Rowntree (1990) and Murdoch (1995) advise that activities should be varied to avoid monotony. I believe this, in itself, would encourage learners to respond to SAAs as they will be responding to different activities. Lockwood (1992) and Rowntree (1990) both suggest varied assessment as it could help take care of the diverse learners' need and as such address varied learners' intellectual demands. The two scholars concur that activities can also help learners share their experiences. This can be possible if activities want learners to reflect on what they would have studied.

Distance learning materials need to have varied layout. For instance, the modules' physical format should be varied by using illustrations such as maps, graphs, drawings, cartoons, and photographs. The materials should be friendly and use the conversational tone. Material developers need to use active verbs to tell what somebody has done. The distance learning material should always have precise instructions as learners study on their own most of the time with no one else to explain anything to them but their written instructions. The instructions also keep learners informed of what they are supposed to do, and provide guidance on how the task should be done. The instruction, therefore, needs to be precise and

brief. They should also have summaries at all times. Summaries serve as shortened versions of the content that has been studied. Only main points need to be highlighted here. The summary has to be as brief as possible. ODL material developers can use certain expressions to convey an emotion.

Active verbs put emphasis on content while passive verbs involve roundabout phrases and sentences that are generally longer. Active verbs also help writers simplify their sentences. Writers need to *"write like you would talk to a learner. If you do so, your sentences will be short and simple; for long convulated sentences just don't occur in ordinary conversation … the shorter your sentences, the more rigorous they will be. The fewer the words, the more emphatic."* (Rowntree, 1990, p.223). Following this background, it is imperative that ODL materials should converse with the learner. The learner should not miss their tutor in the materials. This will encourage them to have the zeal for studying.

Rowntree (1990) further posits that content layout should be user-friendly to help sustain learner motivation. The title of the study material, for instance, should tell the user or reader what the module is all about. There should be a content list, presented in order of occurrence and a list of objectives to tell the learners what to expect. An introduction should always be provided in ODL materials. This is very important as it provides an overview of what is contained in the module. This would also help arouse readers' or learners' willingness to go through the material, and convince the learner to go through the content to the end (Rowntree, 1990). The introduction part functions as a bridge that may be used to link what the reader may already know with that which they are expected to learn, and may even suggest how learning should be done.

The content needs to be presented in a language to which the learners can easily relate. The tone of an ODL lesson should not be just continuous notes, but that *"of an enthusiastic teacher enjoying a discussion of the subject with a responsive learner"* (Rowntree, 1990, p.207). The person developing these materials has to imagine that he or she is talking with the individual for whom the material is being developed as this will allow the learner or user of the material, as in the words of Rowntree (1990, p.207) to *"hear your voice reaching out from beyond the paper."* For distance learning to be effective, study materials should be easy to use with very little or minimal human intervention. Materials should be developed so that

they contain both a mentor, a coach and a counselor ""within" them. They should be the type of materials that would motivate learners.

Print is the most accessible medium when delivering education through the ODL mode in developing countries. However, there is a need to integrate other media as well. This should be done to facilitate understanding that cannot be done through print media, but also to help break the possible boredom that may result due to the monotony of print. The medium used should be effective, relevant and convenient for use by learners. ODL practitioners, therefore, need to integrate different media. However, these cannot replace the human factor necessary to motivate the learners. Rowntree (1990, p.268), in his writing, postulates that *"occasional face-to-face seminars can refresh learners' spirits ... It is generally easier to stimulate your learners' motivation face-to-face than it is in print, or even on audio-tape."* Learners at BOCODOL have for some time experienced serious challenges with their practical subjects especially those that are science-related. They have often experienced challenges where immediate feedback may be necessary following their reading and attempted experiments.

It has become clear that interaction is a critical component of ODL. The Theory of Instructional Dialogue, if used to guide ODL study materials, can facilitate that interaction.

Parer (1989, p.230-1) argues that educational materials used for ODL learners

> *... are both permanent and public, in direct contrast to classroom and lecture hall, where most teaching happens through the spoken word behind closed doors. Permanent materials lend themselves to detailed courses in a way that traditional teaching does not, because it is possible to link systematically objectives, methods and content, and to improve the system through field trials and feedback. The public availability of the system also lays it open to public critique and accountability – a powerful incentive for competence and good work*

Sievens (2000) postulates that ODL materials should be accessible. When preparing these materials, developers have to consider the diversity of the learners and consider the fact that they are actually coming from *"various linguistic backgrounds, including learners learning the majority language as a second or sometimes third language"* (p.18). He further argues that the language used in instructional materials should be suited to the learners' potential

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and competence. Sievens (2000) further advocates for the development of highly interactive ODL materials, arguing that *"as an ODL author one should always make sure that individuals are presented as unique characters that are interacting with each other and are bearers of a dynamic culture"* (p.19).

Gagne (1972) in Smith and Ragan (Ed, 1999) presented four main parts of instruction that are needed to guide in the development of an effective ODL lesson. These are summarised in the table below.

Table 6: Sections of effective ODL lessons

Introduction	Activate attention and arouse interest in lesson, enable learners to focus their attention on learning task, establish purpose (objectives), arouse interest and motivation, provide overview.
Body	Recall relevant prior learning, process information and relevant examples, focus attention, evaluate feedback, stimulate recall of prior learning, facilitate learning using different learning strategies, elicit response, provide feedback.
Conclusion	Summarise and review, transfer learning, provide summary and review, re-motivate, provide closure.
Assessment	Assess performance, evaluate feedback, conduct assessment (marked assessment like tests and assignments) provide feedback and remediation

Source: Smith and Ragan (1999)

An overview of the lesson is necessary as part of the introduction. Smith and Ragan (1999, p.117) pointed out that a highly supportive lesson *"might provide an overview that includes a brief content outline as well as an overview of the instructional approach to be used."* The two scholars further encapsulated that *"being informed of the instructional purpose helps the learners feel expectant and begin to summon knowledge and strategies that will help them achieve the objective"* (ibid). In the body of instruction, learners are *"stimulated to retrieve knowledge from long-term memory that is necessary or helpful in learning the new objective… The body also relates what has been learned earlier on with the information that will be acquired in the lesson"* (ibid). Elaboration is a mental activity of comparing two concepts, that which learners already possess and the new information (Smith & Ragan,

1999). The concept is called elaboration as the *"learner is required to elaborate on new information by searching for relevant personal experiences or memories that extend the new information by making it personally meaningful,"* (p.112).

Although learners' attention has to be involved at the very start of the lesson, it is important to continually re-focus it throughout the lesson to ensure that the learner remains attentive. This can be done through a number of ways and include the following, according to Smith and Ragan (1999), learners can highlight what they think is critical content, take selective notes, mentally rehearse sections of the content learned and highlight or list content they need to pay attention to. In ODL, it is important to scaffold the instruction. Learners can, for instance, be asked questions that can help them handle the most critical features of the lesson, or point out unique or distinctive attributes of a concept learned.

Developing effective ODL print study materials is every institution's concern as this would directly contribute to learners' understanding of the content. Yousuf et al. (2008) state that distance education materials are different from conventional materials as they are central to, and determine the success of ODL learners. They argue that

> *For distance education the course structure and the coverage of the topic should be neither too extensive nor limited. Furthermore, the course content must be up to date, incorporating the latest research on theoretical concepts and empirical studies. The course content should encourage and motivate thinking by students, and the level of difficulty must be appropriate for the target group* (p.124).

Literature on the design and development of ODL in a developed context is limited. This is better than in the developing context where print has for a very long time remained the sole media of learning. Not much is available on ODL, in particular the design and development of study materials, and how they contribute to learner motivation, retention and academic progression, yet open and distance learning can be traced back a number of years in developing countries. Most study materials for developing countries are print-based due to technological illiteracy and under-development, as well as lack of funding for using integrated media. Some developing countries which are only starting to offer ODL to their citizens remain challenged when it comes to the use of ICT. This is because of many factors that include the countries' network connectivity which is still very poor and under-

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developed. The only forms of technology used by many developing countries are radio and audio-tapes. These are again not accessed by all learners especially those who come from disadvantaged backgrounds who cannot afford radios or tape players, or where there is very poor network. Henrichsen (2001) opines that use of ICTs can greatly enhance feedback between facilitators and learners. However, this is a challenge in developing countries where a majority of learners, especially those amongst indigenous populations, could not afford communication devices such as radios, television sets, and computers. Technological options are, therefore, still limited to some learners. This poses a challenge for a subject like English which needs to be spoken for one to adequately learn and be proficient in it.

2.4.2 Designing and developing ODL study materials for developed contexts

Most of the necessary activities for the materials development process such as using team work approach, using simple language, having in-text activities and others seem to be the same for both developed and developing contexts (Rowntree, 1990; 1992; 1997; Smith and Ragan, 1999; Sievens, 2000; Parer, 1989; and Houghton; 2004). However, the results in terms of learner progression differ. This might suggest that proficiency on material designers and tutors in developing contexts does not match those of material developers and tutors in developed countries. Almost all developing contexts use a language that is foreign to them, ie, not their mother tongue or national languages as medium of instruction, a clear example being Botswana. The developed worlds do not only depend on print materials, but also on the use of other integrated media to support learning. In many developed countries, such as the United Kingdom, Malaysia, Canada and the United States of America. ODL course material developers infuse ICT into their study modules. They integrate different media to ensure that effective learning and support take place even in the absence of a tutor or facilitator. By integrating different media they automatically narrow the communication gap that exists, reducing the spatial distance which is a key challenge in ODL. Smith and Ragan (1999, p.286) define media as *"the physical means by which the instructional message is communicated, such as television, print materials, teacher or computer."* No single medium is ever enough for a programme; there is a need to integrate more than one medium to facilitate easy and effective learning and understanding of the content. Smith and Ragan (1999) consider a number of advantages for using integrated media as follows:

- hold a great deal of information in its memory

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- deliver dynamic and high quality graphics

- foster high level of interactivity

- adapt its presentation to the learner, adjusting the content of the instruction to the needs of the learner

- serve as a good medium for individual learning

- maintain a high level of control over what the learner is allowed to attend to at one time

- adjust the type of feedback that it gives to the type of response that the learner makes

- retain and analyse records of the progress of the learner and adapt future instruction sequences to the needs of the learner

- highly interactive and

- provide prompt feedback.

Today ICT is considered a highly effective tool in the development and delivery of learning. It is common for developed countries such as United States of America, United Kingdom and others to infuse the use of audios and videos in their study materials (Rowntree, 1990; 1992; 1997). These make the materials highly interactive and exciting to use. This also helps answer my research questions:

(i) What are the key design features of printed study material provided to secondary school level ODL learners enrolled with BOCODOL?

(ii) To what degree does the design, development and delivery of ODL study materials facilitate access to, and mastery of content?

Materials sent to ODL learners enrolled with BOCODOL and other institutions for developing countries such as Indira Ghandi National Open University in India and Kigali Institute of Education in Rwanda lack the integration of media that we see in materials for developed contexts. One can therefore, wonder if print alone can help learners progress with their study. Sanjaya (2001) argues that in this time of technology, distance learning material developers need to ensure that they integrate different media into the materials to enhance learner interaction as they study on their own. At BOCODOL where there is a unit dedicated to e-learning, teaching with ICTs should be embraced. There is sufficient technology and

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support to help instructors deliver improved content to learners through interactive sessions using various platforms.

ODL can be successfully provided through three types of support foundations as summarised in the table below.

Table 7: Types of support foundations in ODL

Support function	What it facilitates
Cognitive	Supports and develops learning through course materials and learning resources for individual learners
Affective	Provision of a conducive environment which supports learners, motivates and enhances self-esteem
Systematic support	Establishing process and information management systems that are effective, transparent and learner-friendly

Adapted from: Parer (1989)

Over and above these factors, support should be visible in the modules that learners use to study. The next section will discuss the different strategies of learning through ODL.

Strategies of learning through ODL print study materials

Having looked at how interactive ODL print materials could be developed, it is important to emphasise strategies of how one can learn using the materials developed for ODL. It is important for distance learners to discuss learning strategies that can lead to their success with their tutors, and institutions should lead in guiding learners' study skills of learning through the ODL mode. Distance learners may adopt different approaches to facilitate the understanding of their learning. The material developers and tutors need to vary their teaching by using problems, activities and dramas to present the content – starting with the easiest to create and maintain learners' confidence. Recording of answers should also be varied: ticking boxes, circling, drawing a figure, providing a missing word, etc. ODL materials can also use of pictures to help simplify reality, especially when the topic is too complicated for the teacher to explain in words only. In most cases, learners learn best what they see rather than what they are told verbally (Rowntree, 1990). These learning approaches contribute to different achievement and academic performance as explained in the next part of this study.

Houghton, (2004, p.9) explains defines **surface learning** as *"the tacit acceptance of information and memorisation of isolated and unlinked facts. It leads to superficial retention of material for examinations and does not promote understanding or long-term retention of knowledge and information."*

Surface learning leads to passive learners who just accept information as given. Houghton (2004) shares that unlike in deep learning, learners here only read to later reproduce what they would have learnt without any reflection, what so ever, on what it means to them in real life. They do not even relate what they would have studied to what they already knew. Most learners here only memorise the facts for them to meet assessment requirements so as to pass, yet they would later in life fail to meaningfully use what they had been taught. Briggs (987) and Houghton (2004) concur that surface learning mainly focuses on memorising and recall of content with very little understanding. The end result is low achievement. If left unguided, distance learners can easily opt for this approach which may not possibly work for them in future.

Deep approach learning

Houghton (2004, p.9) contends that deep learning *"involves the critical analysis of new ideas, linking them to already known concepts and principles, and leads to understanding and long-term retention of concepts so that they can be used for problem solving in unfamiliar contexts."* In my view, Houghton (2004) suggests that deep learning strategies empower learners with life skills to face their real-life challenges, and places them in a better position to diligently face and apply the knowledge they would have acquired to address these challenges. It is as such critical for material developers to facilitate deep learning by developing comprehensive, yet straight forward study materials that learners could easily understand and relate with. Deep approach also allows learners to reflect on their background knowledge and understanding to interpret what they learn (Sibomana, 2014). This corroborates Houghton's (2004) view that since deep learning involves deeper analysis of new knowledge, learners may use it when encountered with contexts they may have never experienced before. Deep learning leads to higher achievement compared to the surface approach. This is because deep learning involves facilitating learning driven by search for desired outcomes such as high grades and examination success. Deep learning also emphasises activities that are considered critical for students' academic success. The

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approach further takes cognisance of learners' cultural and socio-economic background, and this makes it ideal to address to learners' diversity.

Learning approaches that have proved effective include always taking notes when studying as well as having a dictionary to consult at all times. This has always proved effective when studying alone with some difficult vocabulary one may not understand. The other approach is to read extensively to complement information on course modules and to be abreast with the latest information regarding the topic of study. Teaching and learning strategies for ODL should, therefore, be able to close the distance gap between the learner and the facilitator. The trend is such that the learner interacts with the content alone, then if he or she needs further assistance he or she moves on to ask for help from friends before they finally engage their tutors or facilitators. Swan (2002) and Ussher (2004) concur that for learners to be happy and satisfied about their learning, they should first be satisfied with the interaction they have with their facilitator. If they are satisfied, learners can be motivated to learn more.

Language – the way to content accessibility in ODL

Print study materials can be developed using some of the best theories and models of instructional design. However, as long as learners are not comfortable with the language of instruction, they will always underperform. The Report of the National Commission on Education of 1993 acknowledges that Botswana, as a country, believes in education to help people further develop and embrace their values such as culture and language, (Republic of Botswana, 1993, p.19). In 1977, Education for Kagisano (Social Harmony), was adopted as a philosophical policy for education. Jotia and Pansiri (2013) argue that *"the policy was a nation-state building strategy to ensure that citizens were educated along the lines of democracy, peace, solidarity and social justice."* The two scholars argue that as good as it was meant to be, the policy made a mistake as it assumed that Botswana was a homogeneous cultural society, disregarding other cultures existing in Botswana. The policy made English and Setswana the only two official languages and as Jotia and Pansiri (2013) observed, *'The two languages became the only medium of instruction in the education system, against a heterogeneous society that is linguistically pluralistic and culturally diverse"* (p.102). In the absence of an inclusive education policy English and Setswana will remain the languages of instruction from childhood to tertiary education, to the disadvantage of many other groups.

Botswana was a British former colony. This means that the government inherited and used English language since the colonial era. Though English is not native to any group in Botswana, more than 80% of the population can communicate using English, according to the 2011 population and housing census (Botswana Government, 2011). This means that majority of citizens understand English. However, it is important to note that English is only used in schools after three years of primary schooling. Before that, Setswana, which is also spoken by over 80% of the population, Botswana Government (2011), is used as a language of instruction. The 80% of the population that speak Setswana does not all speak it to the level of their respective home languages or mother tongue languages. This is because English is only used in schools, and the moment pupils leave classrooms they immediately switch to their home languages. It is important to note that even in schools where it is supposed to the language of instruction, some teachers prefer to teach the different subjects using Setswana language as was explained by some participants of this study, that some of their tutors taught them in Setswana. Communicating in the target language is important in language development. To master language one must, therefore, communicate using it. Murdoch (1994) asserts that for one to develop proficiency is to do reading and writing activities. I support this view completely. However, for ODL institutions such as BOCODOL, reading, writing and speaking proficiency cannot be attained easily. This is because reading activities are completely missing from the study materials. Over and above missing activities that could facilitate proficiency of the language, delivery of the content is itself compromised. Collier (1987, p.618) rightfully contend that *"Language is the focus of every content-area task, with all meaning and all demonstration of knowledge expressed through oral and written forms of language."* This means that learners fail to be proficient in communicating in English. This might be due to the fact that the Ministry of Education and Skills Development does not carry out English proficiency examinations for admission of students. This is despite English being a determining language for admission at tertiary institutions. It is for this reason that teachers engaged by ODL institutions to be both material developers and tutors, may not have English proficiency.

Though there is no policy on the use of English as the language of instruction, the revised national policy in education of 1994 encourages all schools to teach using English as a medium of instruction. This remains to be achieved especially in rural schools where a most learners are taught in Setswana. This is probably because the teachers themselves lack proficiency in speaking and teaching English language. Collier (1987, p.618) argues that

"Language in the context of schooling need to develop full proficiency in all language domains ... and all language skills (listening, speaking, talking, writing, and metalinguistic knowledge of the language) for use in all the content areas." As such, if the educators themselves lack English language proficiency, learners will not be able to acquire the needed proficiency.

Language in education is very important as it is the vehicle through which ideas and knowledge, factors that facilitate learning, are communicated. Language, therefore, remains a pillar through which learning goals can be achieved. The challenge Botswana is facing as a country is that close to fifty years since attaining self-rule, the country still has no language policy in education. This could provide guidance in the advocacy of other ethnic groups whose languages are not used in the country. Pressure groups like the Society for the Promotion of Ikalanga Language (SPIL) and Kamanakao have been formed to advocate and promote the use of other mother tongue languages in schools but have made very little impact as the situation has remained unchanged over time. A number of researchers such as Jotia and Pansiri, (2013); Mooko (2008) and Chebanne and Nyathi-Ramahobo (2003) have, however, started to write to challenge the status quo and to encourage the government of the day to be more responsive to people's needs, and to be more inclusive in terms of the language of instruction in education, especially during the early years of schooling.

Though there is no formal language teaching policy, Botswana provides guidance on languages to be used in the teaching and learning processes (Republic of Botswana, 1994). This is because even in the absence of a documented education language policy, Setswana is used in public schools for children up to nine years as a medium of instruction. English is the official language and takes over from Setswana as a language of instruction from Standard 3, where most children are about ten years (Mooko, 2008). This clearly contravenes the recommendations of the 1994 Revised National Policy on Education, which advocates for use of mother tongue in early years. This is also in spite of the UN advocating the teaching of children using their first language as a medium of instruction in the early years of their education (UNSECO, 1953). This convention made teaching young children in their home language a fundamental human right that could not, and that should not, be disregarded. The Republic of Botswana (1997, p.3) Vision 2016 document clearly compel inclusion of all children in stating that *"No Motswana will be disadvantaged in the education system as a result of a mother tongue that differs from the country's two official languages; English and*

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Setswana ... The future of Botswana must be a society where there is equality of educational opportunity, and where no citizens should be restricted to the circumstances of their birth." The Vision 2016 document further motivates that *"Education must be used to enrich Botswana's cultural diversity. All of the nation's languages must be taught to a high standard at primary, secondary and tertiary level"* (Republic of Botswana, 1997, p.31).

More than 80% of the population speak Setswana as their mother tongue (Jotia & Pansiri, 2013; Mooko, 2008). Therefore, the use of Setswana was a deliberate effort by government when the country attained independence, to encourage homogeneity of the country as this was viewed as a factor that could inculcate the spirit of nation building (Kamwendo & Mooko, 2006). According to Adeyemi (2008), in Botswana *"bilingualism implies the provision of education to the citizenry through the medium of English, the official language, and Setswana, the national language. Considering that language and education go hand in hand, the language in which the education is achieved is a very important factor in the process of literacy"* (p.21). Jotia & Pansiri (2013) corroborate Chebanne & Nyathi-Ramahobo (2003) who argue that currently in Botswana there are fourteen languages spoken at home as mother tongue, depending on peoples' culture and background, yet only English and Setswana are used in schools. This further extends the scope of studies by Mhlauli (2012) and the 2011 population and housing census results. The scholars Jotia and Pansiri (2013), Mooko (2008) and Chebanne and Nyathi-Ramahobo (2003) have a dominant belief that it is important to develop and empower the various groups by using the vernacular languages to learn, at least during the formative years of schooling.

Nyathi-Ramahobo (1997), however, observes that the current arrangement can only work for learners whose mother tongue language is Setswana while leaving out non-Setswana speaking children. She postulates that these children use their second language to learn, and before they even master it they are taught using English which is their third language. This is a clear departure from recommendation 18 of the National Commission of Education of 1993 which stipulated that where parents request that other local languages be taught to their children, the schools should make the necessary arrangements to offer such languages as co-curricular activities. This is not happening and instead, foreign languages such as French are being introduced at junior certificate level where learners have options to choose a third language in addition to Setswana and English. The introduction of this third language comes as an extra challenge as there is no funding provided especially for designing and developing

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study materials that would cater for the introduction of the third language in schools. At least for subjects like French, the French Embassy in Botswana is partly funding the introduction of the language while minority language pressure groups lack the necessary funding to do the same for their own languages, (Republic of Botswana, 1993).

Setswana drives the culture and recreational programmes of Botswana. This is evident in the National Commission of Education (NCE) of 1977, pp.177-178, which posits that

> *Any programme of cultural development must start with Setswana language and literature. Setswana is a vital medium of communication in the country and is the vehicle through which the national culture is largely expressed. A major effort is needed in standardising the orthography and developing the vocabulary of the language. In translating works into Setswana, in encouraging original writing and recording the myths, legends and poetry of the people ... The availability of reading materials particularly in Setswana but also in English is of critical importance to the maintenance of literacy amongst school leavers, and to the cultural development of Botswana and the creation of an informed public opinion amongst them*

The 1977 National Commission on Education Report clearly states that everybody in Botswana, irrespective of cultural and demographic background, is expected to communicate in Setswana and English. If this persists, then other languages, especially those spoken by minority groups will cease to exist. This is another departure from Vision 2016 which advocates for equal opportunities in language, among other factors. The MoESD Report on an unpublished study on Primary Schools' Hostel desertion (2010), has shared that in the Kgalagadi region, children of Bakgalagadi and Basarwa use languages through which they are not comfortable studying. This practice has possibly contributed to learners deserting school and even leaving the hostels where they are accommodated, due to possible intimidation when using languages with which they are not comfortable studying. The trend is continued deterioration of performance in Kgalagadi, Gantsi, North West, Southern and Kweneng regions. These are predominantly non-Setswana speaking districts and one can thus argue that the deterioration in performance in these areas is largely because of language as districts that are largely Setswana speaking perform very well during examinations (Botswana Examination Council Reports 2012; 2013).

2.5 Conclusion

The chapter was on the review of the related literature regarding the design and development of ODL study materials and how accessible they are to facilitate content mastery and enhance learner progress. In this part of the study, I reviewed what has been written by other researchers in relation to my topic. I have, however, noted that not much research has been done especially in developing countries contexts regarding the accessibility of ODL study materials for secondary level learners, and how the study materials can motivate learners for them to study until they complete their programmes. The absence of adequate research has, therefore, left a gap in the literature as there is nothing much in place to guide and inform practice relating to the design and development of ODL study materials.

The process of designing and developing ODL study materials could be influenced by a number of factors such as language, examples used in the study materials and interactive content. For this part of the study I read that there were factors that could easily make study materials completely inaccessible to learners. If the language used is not at the level of learners, they would never be able to understand it. If learners are not familiar with illustrations and examples used they would not appreciate them, hence they would not help them progress with their studies. All these, I came to appreciate through my interaction with two theories of instructional design that I used to guide my study. These were Sweller's Cognitive Load Theory (CLT) and Gorsky, Caspi and Trumper's Theory of Instructional Dialogue (TID). CLT emphasised aspects needed to design and develop relevant study materials that used language, illustrations and examples that learners would relate to and appreciate, while the Theory of Instructional Dialogue emphasised the dialogue in ODL study materials. This chapter also looked at the types of interaction in ODL, and how interaction can be used to further facilitate understanding of content by learners. This chapter again discussed the designing and development of study materials for both the developing and the developed contexts. I appreciated that a substantial amount of research has been carried out on developed contexts which largely use integrated media to support ODL while the developing contexts still use print as the main medium of content delivery. In this chapter I discussed the design and development processes of ODL study materials to answer my research questions. I also discussed how ODL print materials could facilitate content mastery, hence academic progression of learners enrolled with ODL institutions if well designed. Study materials need to be interactive, conversational, need to cover adequate

syllabus objectives and need to be developed using the language that the learners best understand and relate with. In this chapter I again discussed some strategies that could enhance and encourage effective learning in ODL. Effective materials are the most important factors that can facilitate learning. Developing countries such as Botswana continue to present good ideas to improve the education system. However, nothing seems to work properly merely because decision-makers continue to imagine Botswana as a homogeneous society, something that it is not. This I appreciated as I looked into literature relating to language and how it could enhance success in education.

In the next chapter I discuss the research design and methodology. The chapter discusses the interpretive paradigm which I used for my mixed methods study. The chapter also introduces my unit of analysis, the ODL study materials used by secondary level students. The chapter also introduces both my research sites and participants, who provided me with data that triangulated my findings from the document analysis exercise. The chapter will also look into the various means through which I gathered my data. I again explain the details of my data collection processes, as well as the instruments I used. These include questionnaires, interviews and document analysis.

Chapter 3: Discussions of research design and methodology

3.1 Introduction

Research in the social and human sciences can follow various approaches. One can use qualitative, quantitative or multiple (mixed) methods research approaches depending on the issues the researcher wishes to address (Creswell, 2003). In this chapter I discuss the interpretive paradigm that helped answer my research questions. I used interviews and document analysis for qualitative data collection. Questionnaires were used for quantitative data collection. I also discussed ethical issues with my participants. These included issues of consent, willing participation, withdrawal and confidentiality.

The data collected was aimed at addressing my research questions, restated below:

    (i)   What are the key design features of printed study material provided to secondary school level ODL learners enrolled with BOCODOL?

    (ii)   To what degree does the design, development and delivery of ODL study materials facilitate access to, and mastery of content?

3.2 Research paradigms

I used the interpretive paradigm as it is best suited when undertaking a mixed, largely qualitative study. I evaluated the print study materials, and the attitudes and perceptions of material developers, learners and tutors. These were people, some who have developed the study materials, some who have interacted with materials under evaluation while some continue to interact with it and some offer support and guidance during the delivery of the material. Interpretive design involves real life situations (Briggs, Coleman & Morrison, 2012; Creswell, 1993; LeCompte & Presissle, 1993; Leedy and Ormrod, 2010). As a researcher I was thus able to make an interpretation of what I see and understand from the study materials and my other sources of information as I directly interacted and had personal contact with my participants (Creswell, 2005). Terreblanche and Durrheim (1999, p.124) postulate that interpretive research *"in first-hand accounts, tries to describe what it sees in rich detail and presents its findings in engaging and sometimes evocative language."* Clarke and Dawson (1999) highlight some of the advantages of an interpretive paradigm as the fact that it recognises the existence of multiple social realities and the need for a researcher to explore different interpretations of different social experiences. I was, therefore, careful to accommodate all these factors. Merriam & Associates (2002) observed that in an interpretive

study *"the researcher is interested in understanding how participants make meaning of a situation or phenomena, this meaning is mediated through the researcher as an instrument, the strategy is inductive, and the outcome is descriptive"* (p.6).

Qualitative designs are commonly associated with the interpretive paradigm, in which *"researchers try to get as close as possible to the participants being studied ... conduct their studies in the field where participants live and work – important contexts for understanding what participants are saying"* (Creswell, 2007, p.18). Creswell (2007) corroborates Denzin & Lincoln (2005, p.3) who postulate that *"qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them."* Creswell (2007), and scholars such as Bak (2009); Brewer (2007); Briggs et al. (2012); Henning et al. (2004) and Punch (2006) all concur on some salient features of an interpretive paradigm. As a researcher I played a very critical role in my study. I was at the centre of my data collection which was done in the participants' natural setting. This enabled me to get first-hand information from participants experiencing the issue in question, but also to take note of their behaviours, perceptions and attitudes. For this study, I developed protocols and other documentation that I used for data collection, including interview guides, questionnaires and document analysis templates. During my data collection activities I was at liberty to use multiple data sources. This study used questionnaires, interviews, and document analysis for data collection. I used a number of data collection methods after realising that one method would not adequately address my research questions. The use of multiple methods brought to the surface multiple realities which I could not have noted with a single method. I interpreted what I saw, heard and understood, and this was informed by participants' background and context of the study. The intention for this study was not to ultimately generalise but to gain a true perception from participants in their natural setting.

The interpretive paradigm allowed me to directly interact with my participants, as observed by Creswell (2009, p.176) that *"Qualitative research is a form of interpretive inquiry in which researchers make an interpretation of what they hear, see and understand."* I wanted to get a full understanding of whether the study materials were accessible enough to facilitate content mastery by learners, and also to hear and appreciate what participants needed to say, first hand, regarding their study materials. For my study I also needed a detailed understanding of the problem facing ODL institutions – high failure and high drop-out rates.

It was, therefore, necessary for me to talk to participants directly, and in their natural settings, to allow them to tell their stories, and re-live their experiences wherever possible, a view posited by (Creswell, 2007). I was also able to conduct an intense evaluation of their study materials and marked assignment scripts. An interpretive paradigm views participants involved in a particular study as primary data sources and uses semi-structured interviews and (focus) groups for data collection. This allows for extended interactivity with participants. This is in line with Creswell's view that a multiple methods design captures the best of quantitative and qualitative approaches (Creswell, 2003). The same scholar further comments that the mixed methods approach utilises strategies of inquiry where data collection can either occur at the same time or in sequence. He asserts that the advantage of using multiple methods is that the researcher is able to use the results of the qualitative component to explain and interpret the results of the quantitative component of the research. The mixed methods approach was most suited to my study as it enabled me to get a full understanding of the design and development of ODL study materials, which I wanted to know about. I considered it most appropriate as I was dealing with study materials and human subjects (Gough and Madill, 2007). Qualitative researchers conduct their studies in the field where participants live and work, and these are important contexts for understanding what participants are saying (Creswell, 2007). The other strength that attracted me to this paradigm was that as a researcher I only needed to involve a few people as opposed to the positivist approach which needs involvement of many people.

I used the mixed methods approach to enable a thick description. Questionnaires were used to gather quantitative data. I explained to my participants about their rights of participation. I informed them that once they had started their participation, they should not fear to withdraw at any point; withdrawing their participation from the study was their right. I also shared with my participants about their right to privacy and confidentiality. My participants and I agreed that I should mask their identities. This was done to maintain the anonymity earlier discussed with the participants. This chapter also discusses measures that I used to establish trustworthiness. These include triangulation, peer review and debriefing, member checks and an audit trail.

In a qualitative study, variables are usually not controlled as it is exactly this freedom and natural development of action and representation that we, as researchers, wish to study or capture, as observed by (Henning et al., 2004). Participants in my study had a more open way

of expressing their views as I had established a rapport with them. This encouraged them to share openly as we evaluated the study materials they had either developed or used. For one to be an agent of change, he or she has to understand all the underpinning issues related to the study topic. For this study, one therefore had to fully understand the issues related to the design and development of ODL study materials used at BOCODOL to see if they have any impact on the learners' academic acquisition of knowledge after using ODL study materials.

3.2.1 Research design: Case study design

For this study, I opted to use a case study design as my method and used study materials as my unit of analysis. Bromley (1986) concurs with the view that case studies, by definition, get as close to the subjects of interest as they possibly can, partly by means of direct observation in natural settings, and partly by their access to subjective factors such as thoughts, feelings and desires. Brewer (2007) views case study as a detailed account of a particular example of a phenomenon, experience, event or situation, a view corroborated by Briggs et al. (2012); Creswell (2007); Punch (2006) and Henning et al. (2004). Merriam and Associates (2002) view case study as involving *"intensive description and analysis of a phenomena or social unit such as an individual, group, institution or community ... a bounded, integrated system"* (p.8). Brewer (2007) further approves the use of a case study in this kind of study as he argues that a case study can use multiple methods for collecting data, which helps in establishing trustworthiness of the study. The study materials were readily available and I only sought permission from the leadership of BOCODOL to use their study materials for my study, and to a certain extent part-time staff that they had engaged to develop the materials. It is the case study approach that assisted me in establishing a rapport with those involved in the design of the study materials (Punch, 2006).

3.2.2 Research methodology

Research methodology involved the methods of data collection I used for my study, as well as the theories that informed my study. These included the surveys, interviews and the document analysis. I opted for the methods mentioned above as I fully believed and trusted that they could provide the necessary information I needed to answer my research questions. Moreover, I believed that the strength of the qualitative methods and that of the quantitative method would complement each other.

3.3 Background to research sites

Botswana is a developing country in Southern Africa. It is a spacious landlocked country located in an almost central position in Southern Africa. Botswana is surrounded by South Africa, Zimbabwe, Namibia and Zambia in the South, Northeast, Southwest and North respectively and its land area is about 582,000 square kilometres (Republic of Botswana, 2011). This is almost the size of France, Kenya, (a country in East Africa), Madagascar and the state of Texas in the United States of America (Botswana Tourism Guide, 2001; Jotia & Pansiri, 2013). The same sources give the location of the country as between latitude 18 and 27 degrees south of the equator, and between longitude 20 and 30 degrees east of Greenwich. Botswana is a semi-arid country with more than half of the land area being the Kalahari desert in the west. The desert can be extremely hot in summer, recording above 42 degrees centigrade during the day, and extremely cold, recording below 0 degree centigrade in winter (Peolwane, 2013).

The Kalahari desert extends into the neighbouring state of Namibia where it is known as the Namib Desert. Despite this feature, the eastern part of the country is very fertile and excellent for pastoral farming. Botswana has a tropical climate that spreads across the Tropic of Capricorn. The eastern part of the country experiences a considerable amount of rainfall between the months of November and March while areas in the western part receive very little. This unreliable rain pattern lead to mainly subsistence farming. More than 80% of the population speak Setswana, the national language and one of the two official languages of Botswana, together with English (Adeyemei, 2008; Jotia & Pansiri, 2013; Chebanne & Nyathi-Ramahobo, 2003; Molosiwa, 1999).

The study has taken into consideration different learners in their very diverse centres to make a fair analysis of their attitudes and experiences of using BOCODOL ODL study materials. Despite learners coming from very different environments, they all studied the same materials meant to help them progress through their studies. My study included people learning in special circumstances, e.g learners in Gantsi State Prison, and included Basarwa and Bakgalagadi - the disadvantaged and marginalised population of Botswana. These groups of people are mainly found in the western part of Botswana, and have very closely related economic and social backgrounds. However, Bakgalagadi are slightly more advanced than Basarwa as they practice agro-economy as opposed to Basarwa who are still hunter-

gatherers. Many Basarwa still depend on government sponsored relief programmes. This causes the rest of the nation to consider these indigenous groups "spoilt". The indigenous groups counter this suggestion by arguing that they are not able to keep livestock as predators and drought kill their animals. The government also provides Basarwa and Bakgalagadi children attending conventional schools with food, uniforms, transport and other amenities they need for their upkeep and survival, so as to encourage them to continue with their learning. Places that are considered remote are those that are more than forty kilometres from the service centre which has adequate amenities. Amenities include telephone infrastructure, radio reception, well developed transport networks and services, enough employment and training opportunities. Some of the features that characterise remote and rural areas are shown below:

Photos A, B and **C** - Access to remote areas is never easy.

Photo A

Photo B

Photo C

After travelling the impassable roads, one reaches environments that are far from conducive for learning to take place, yet there are learners in such places and households, as shown by **Photos D, E** and **F.**

Photo D

Photo E

Photo F

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The next part of the study will look at the geography of the sites.

3.3.1 Gaborone Regional Centre

Gaborone is the capital city of the Republic of Botswana. This is where most developments such as schools, health facilities, and telecommunication infrastructure are concentrated. The three centres discussed under Gaborone region are Gaborone Secondary School Learning Centre, Linchwe Secondary School Learning Centre and Kaudwane/Diphuduhudu Satellite Learning Centre.

Gaborone Secondary School (GSS) is one of the oldest and most popular government owned schools in the city. Like other institutions, BOCODOL has signed an agreement with the school management to use the facility. Gaborone Secondary School centre learners have access to many resources that learners in villages and satellite centres do not have. There is no shortage of tutors because there are many qualified teachers in the city who are willing to tutor learners enrolled with BOCODOL. This is not the same with satellite centres and other remote areas where there is a shortage of qualified teachers to tutor the level of programmes offered by BOCODOL. The result of this shortage will be primary school teachers tutoring BGCSE programmes, which is far beyond the level they teach in their daytime employment.

Linchwe Secondary School Learning Centre is another research site in Gaborone Regional Centre. The study centre is in the village of Mochudi, about 30 kilometres north of Gaborone. This centre is very much like centres in Gantsi Township and Kang village as there are abundant developments to facilitate learning. There are libraries, there is electricity and generally excellent transport and network infrastructure. Communication is, therefore, not a problem in these centres. There are enough personnel to be engaged as tutors for all levels and all programmes.

Kaudwane and Diphuduhudu centres are Satellite Learning Centres of Gaborone regional centre. They have challenges very similar to those in Takatokwane and other areas of the Kang Regional Centre. Most of the people here are Basarwa and Bakgalagadi. As mentioned earlier, these groups of people are still not convinced as to how education can improve their lives. They, especially Basarwa, still subscribe to their traditional nomadic hunting and gathering lifestyle. The government of Botswana emphasises that Basarwa culture and lifestyle should not isolate them from the rest of the Batswana communities and other ethnic

groups of Botswana. The government believes that like all other Batswana, Basarwa and Bakgalagadi communities should enjoy the fruits of their country's stable economy such as free education and access to free health services. The government has built clinics, schools and other facilities at Basarwa settlements. Where there are schools the government has built hostels to accommodate small children to enable them to get all that is conducive for schooling. They are provided with free food, clothing, water and other necessary amenities at the hostels. However, as most of this population are still hunter-gatherers, they remove their children from hostels and migrate away with them. Though this may possibly be caused by a combination of factors at schools and hostels, the closely-knit culture of Basarwa families may also contribute to this. This conclusion follows an informal discussion I had with one Mosarwa child who had studied through BOCODOL. This student had passed very well and was admitted to the University of Botswana, but could only go there on condition that he was allowed to go with his mother. The MoESD had to sponsor the child and paid for his mother's accommodation to allow her to stay with her son for him to attend his classes at the University.

3.3.2 Kang Region

Kang is a peri-urban centre along the Trans-Kalahari highway which connects Botswana and Namibia. Research sites in this region were Matsha Community College, Gantsi State Prison and Takatokwane Primary School, which is used as a satellite centre. Satellite centres are established to cater for the remote area dwellers who are far from other traditional centres. Kang has a much more developed infrastructure compared to Takatokwane. This is because in Kang there are a number of developments that can facilitate learning and generally easier lifestyles such as telephone landlines, mobile phone signals, secondary schools, clinic, shops, library, post office, and government offices. The population in the Kang region is predominantly Basarwa and Bakgakagadi, most of who, as earlier mentioned, do not value education much. Instead, they cherish their old tradition of hunting and gathering, as well as moving from one place to the other in search of food. This trend is common in most satellite centres and other very remote areas of the Kang Regional Centre.

Some of the participants in Kang came from homes whose first language is not Setswana, yet Setswana is used as medium of instruction in the foundation years of public primary schooling. Despite the government's efforts for equal distribution of opportunities and services to all Batswana, communities in the western parts of the country remain isolated and

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scattered all over the region, making efforts to provide more facilities very difficult. This therefore, makes students in Kgalagadi end up in schools with boarding facilities, separated from their families at a very tender age. This often leads to young ones absconding from school.

Learners at Matsha Community College Centre come from areas around Kang village. Kang is a peri-urban centre with schools and other government offices and facilities. There are good internal road networks as well as communications infrastructure such as postal services. These are facilities that are friendly to distance learners. Kang has libraries and reading rooms. As such, learners living in Kang village are able to access services to enhance their learning. However, the same cannot be said about learners who attend classes at Matsha Community College coming from outside Kang. Some learners attending support sessions in Kang come from Basarwa settlements such as the Central Kalahari Game Reserve, New Xade, Hanahai, Inalegolo and D'kar. These areas do not have reliable transportation systems, and have no development to facilitate learning such as libraries. Learners here are not even able to access tutor support to help them with their content. Learners from areas like those just mentioned end up terminating their studies due to lack of transport to learning centres, transport fare or both.

Learners at Gantsi State Prison are inmates doing their jail term. The learners were doing time mainly for defilement and robbery. They were aged between 22 and 46 years. Inmates in Gantsi State Prison are categorised as not dangerous, and this is determined by the extent of their offences. The learners had a prison officer as their supervisor. The supervisor worked closely with BOCODOL staff at Kang Regional Centre, which is 300 km away from the Gantsi Prison learning centre. Inmates study the same programmes as other learners and, in addition to the academic work, they do practical work organised by Prison Services as they are encouraged to participate in activities that could enable them to earn a living after completing their term. BOCODOL learners doing time in prison are tutored by qualified teachers from outside prison who teach at conventional schools. Their tuition and examination fees are paid for by the state. Arrangements are made for learners in prison to access books from national libraries as Gantsi is a township with well-developed amenities such as postal services, communication networks and libraries.

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In the table below, I summarise the distance of my research sites from Gaborone, where BOCODOL headquarters is situated, and where programmes are developed. They are tabled from the nearest to the furthest.

Table 8: Distances research sites from Gaborone (BOCODOL headquarters)

Research Site	Distance from Gaborone
Gaborone Secondary School	- km
Linchwe Secondary School	35 km
Kaudwane Primary School	190 km
Takatokwane Primary School	200 km
Matsha Community College	400 km
Gantsi State Prison	700 km

Having looked at the background of the research sites, I will now discuss my unit of analysis as well as participants, and the sampling criteria for my study.

3.4 Instructional materials as unit of analysis

For my study I used BGCSE study materials as my unit of analysis. The documents I evaluated were the ones that were central to my research as I wanted to establish their accessibility as well as whether learners were able to master the BGCSE secondary level content when using the materials. The study materials were developed by secondary school teachers, and these same teachers also helped in the delivery of content. I therefore, used them as participants to triangulate my findings from the documents analysis.

The curriculum in Botswana schools is meant to unite the nation. This is evidenced by the fact that public schools in the country use the same curriculum, using the two official languages of Setswana and English, and with children sitting for the same examination, and at the same time. However, children from western parts of Botswana consider the content alien to them and it often comes as a culture shock. The English language syllabus, for instance, promotes creativity amongst learners and more often requests learners to write a creative piece of work about their own experiences, real or imagined, for instance, a train journey or a white wedding they have attended. In some parts of the Kang research sites,

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children know of no other transport system but a donkey-cart. Learners in such areas would naturally have never seen a white wedding, let alone attended one. However, the same can not be said about learners in Gaborone learning centres. Trains and weddings are **common occurances** for learners in some in Gaborone region's research sites and these learners can easily out-perform those in disadvantaged areas in Kgalagadi not because they are any smarter, but because they are more exposed to the issues they would be requested to discuss such as a train journey or a white wedding. The national curriculum allows for content that is a mismatch with both the culture and the socio-economic status of the learners in most parts of Kgalagadi. English study materials make reference to supermarkets, magazines such as Pace and True Love, football clubs such as Manchester United – things that learners in remote and rural areas do not fully understand. Learners found in Kang region were more diverse in terms of cultural background and economic status. The most remote areas of the country and the poorest of the poor are found in this desert region.

3.5 Participants and sampling criteria

I selected five material developers to participate in the study. These were professionals who had contributed to the development of the material under review, either as a writer or an editor. One male and four females participated as material developers. They were all employed; three were secondary school teachers, one was a lecturer in a tertiary institution and one was a primary school teacher.

I had 176 learners participating. The 176 learners responded from the 300 that I had sampled to participate. The people I selected as my participants were information rich to provide me with sufficient information for my study, hence I purposively sampled learners who had been studying with BOCODOL for at least one year (12 months). The learners were aged between 17 and 55 years and they were distributed throughout the identified research sites of my study. These were 101 females and 75 males, and this represented BOCODOL's sex structure as there are many more females enrolled with the college than males (BOCODOL, 2011). This is despite the fact that the Gantsi State Prison centre had only males participating in the study. Of the learners, 102 were unemployed.

Six tutors were also selected to participate in the study. They had been with BOCODOL for a minimum of six months. Of these six tutors, two were males and four were females. They

were all employed - two were teachers at junior secondary schools, two were teachers at senior secondary schools, one was a lecturer at a tertiary institution while one was a primary school teacher.

In research, two methods can be used for sampling purposes, and these are probability and non-probability sampling methods. For my study, I used a non-probability sampling method because my main aim was to undertake an in-depth description and not necessarily to generalise findings (Maree, 2012; Merriam, 2009). I used purposive sampling as qualitative samples mostly tend to be purposive, rather than random (Huberman & Miles (2002; Kuzel, 1992; Morse, 1989). This means that I looked towards the people that could give me the rich information I needed. Creswell (2003, p.220) made an observation that *"In qualitative data collection, purposeful sampling is used so that individuals are selected because they have experienced a phenomenon."* Merriam and Associates (2002) noted that purposive sampling *"involves selecting a sample of information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling"* (p.12). This view has been corroborated by Miles and Huberman (1994) when they posited that *"Qualitative researchers are intentionally non-random in their selection of data sources. Their sampling is purposeful; they select those individuals or objects that will yield the most information about the topic under discussion"* (p.211). I therefore picked participants that I felt had interacted with the materials under evaluation long enough to be more resourceful, and these were the material developers, the learners and their tutors. I knew I could get the information I needed without being overwhelmed by large amounts of unnecessary data.

Ethical considerations

Human participants were not the main unit of analysis for my study. However, I needed them during the study as supporting agents. Before engaging them in my data collection activities, I gave each of the participants a consent form, attached as **Appendices 10, 11** and **12**, detailing who I am, where I work, the purpose of my study and how my study was going to be conducted, a practice explained by Creswell (2009, p.90), *"The researcher develops an informed consent form for participants to sign before they engage in the research. This form acknowledges that participants' rights will be protected during data collection."* Kvale (2007, p.27) further notes that *"informed consent entails informing the research subjects about the overall purpose of the investigation and the main features of the design, as well as*

of possible risks and benefits from participation in the research project ... voluntary participation of subjects and informing them about their right to withdraw from the study at any time." All these I discussed with participants before they could sign the consent forms. However, I kept reminding them during the course of the study that having signed the consent form should not in any way stop them from withdrawing their participation if they so wished, without fear. I emphasised their ethical rights of privacy, confidentiality and anonymity. The participants read and signed the consent form before they started their participation in the study.

As already mentioned earlier in the study, I was granted permission to carry out the study at BOCODOL by the CEO. This permission extended to all BOCODOL study centres. However, the Prisons Department also called me to their office and granted me conditional permission to carry out the study at Gantsi Prison. For security and ethical reasons, I was not given a copy of the signed agreement. However, the housekeeping rules included the fact that I was not allowed to interview the participating student inmates, but just to administer the questionnaire to them. I was also advised to administer the questionnaire in the presence of a Prison Officer and was not to give the respondents any gifts in return. Generally it was easy for me to win the trust of the learners especially as I was introduced to them by officers stationed in their respective regions. Some knew me already as I have authored modules for some of the courses they were taking such as Development Studies and History. For them it was a matter of connecting the face to the name they had heard before.

3.6 Instrumentation

Cohen, Manion, and Morrison (2007) explain instrumentation as methods that the researcher would use to collect data, and how this data would be collected. They further explain that the methods or instruments used to collect data should be the most suitable for issues to be addressed. In other words, my instruments for data collection needed to be relevant to any information that would be gathered during the study. During the study, I used BGCSE English Language study materials and learners' marked English Language assignment scripts to investigate the lack of progression and low output rates amongst distance learners. My intention was to establish if there was a link between materials and the low output as experienced by ODL institutions. In evaluating the documents, I developed instruments that helped me analyse a number of issues regarding the design and development of ODL

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materials. These included issues such as the recruitment exercise of engaging these writers, establishing whether they were trained and establishing if they were given any support by BOCODOL during the material development process.

3.6.1 Document checklists and rubrics

Briggs, Coleman, and Morrison (2012) define document analysis as *"a form of qualitative analysis that requires researchers to locate, interpret, analyse and draw conclusions about the evidence presented"* (p.298). The advantages of document analysis include the fact that the "*researcher is able to get primary data ... can be accessed at a time convenient to the researcher ... contain facts that may not be readily available such as dates, names, specific event details ... can provide information that may be difficult to gain via interviews"* (Briggs et al. 2012, p.299). It is important to consider the authenticity of the document, credibility and even representativeness of the document analysed. Document analysis for my study involved close reading and evaluation of both BOCODOL study materials and the assignment scripts to check if there were features that made the materials sufficiently learner-friendly to reduce the isolation experienced by learners and thus enhance active learning, as well as whether they contributed to learners' acquisition of knowledge, hence progression.

For my study I used BGCSE English Modules. The BGCSE English course has 12 units in all. Though I evaluated most of the units to get some information on issues such as relevance of content, font, layout, white space and choice and use of language, I mainly focused on Units 1 and 12: Unit 1 because it lays the foundation for the learners and 12 as it is the last in the series of the BGCSE English Units. The BGCSE were developed in 2001, and were first used in the same year. The development of the units was sponsored by BOCODOL. This was because part-time staff had to be engaged to assist in the development of the material – referred to material developers in this study. The material developers were subject experts and were assigned the writing and editing roles by the course coordinator at the College. The units have not been published and have never been reviewed since their development. The materials are only for use by BOCODOL learners. They have between two and five years to complete the BGCSE English programme.

For each Unit, material developers were expected to facilitate effective learning and accessibility of content, among other things, through:

- Using familiar examples to help contextualise the content (Cognitive Load Theory)

- Engaging with learners by writing interactive materials, (Theory of Instructional Dialogue)
- Writing in a friendly, easy to understand language using active voice.

I have appended sample study materials for units 1 to 5 as Volume 2 of my study. Below is a sample cover page for the BGCSE English course. The cover was generic for all the units and the only difference is the Unit number (see Illustration 1 and 2 below).
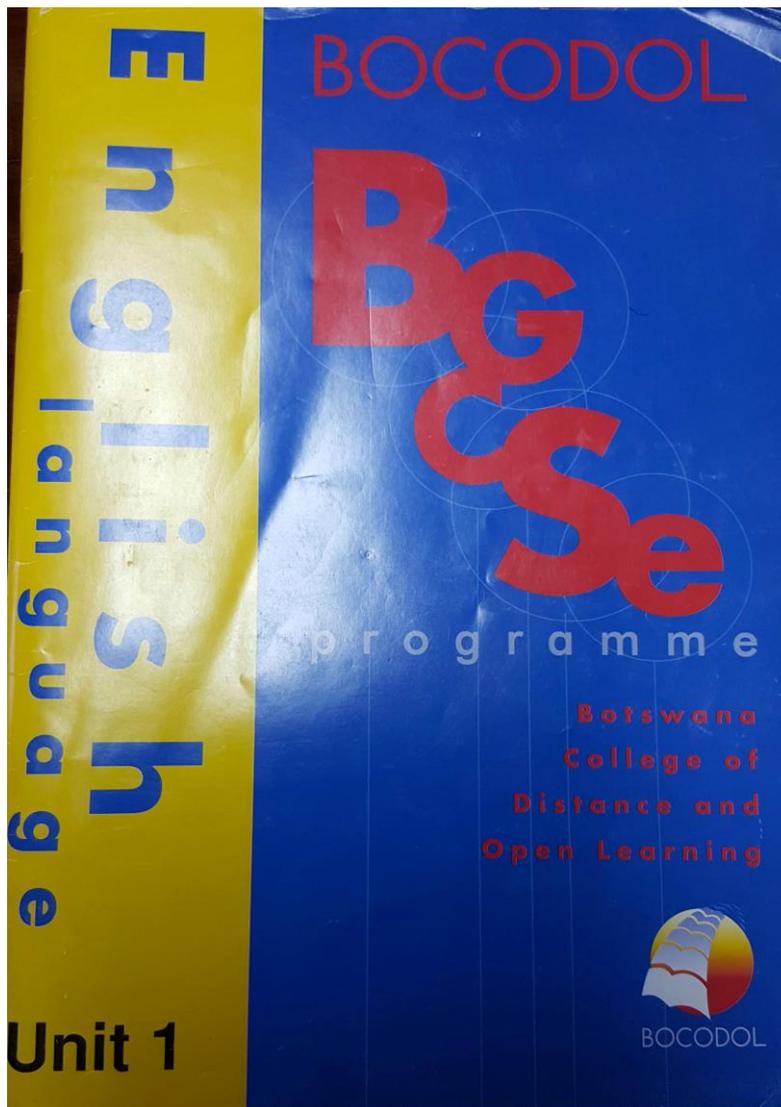
Illustration 1: Sample of Unit 1 cover page
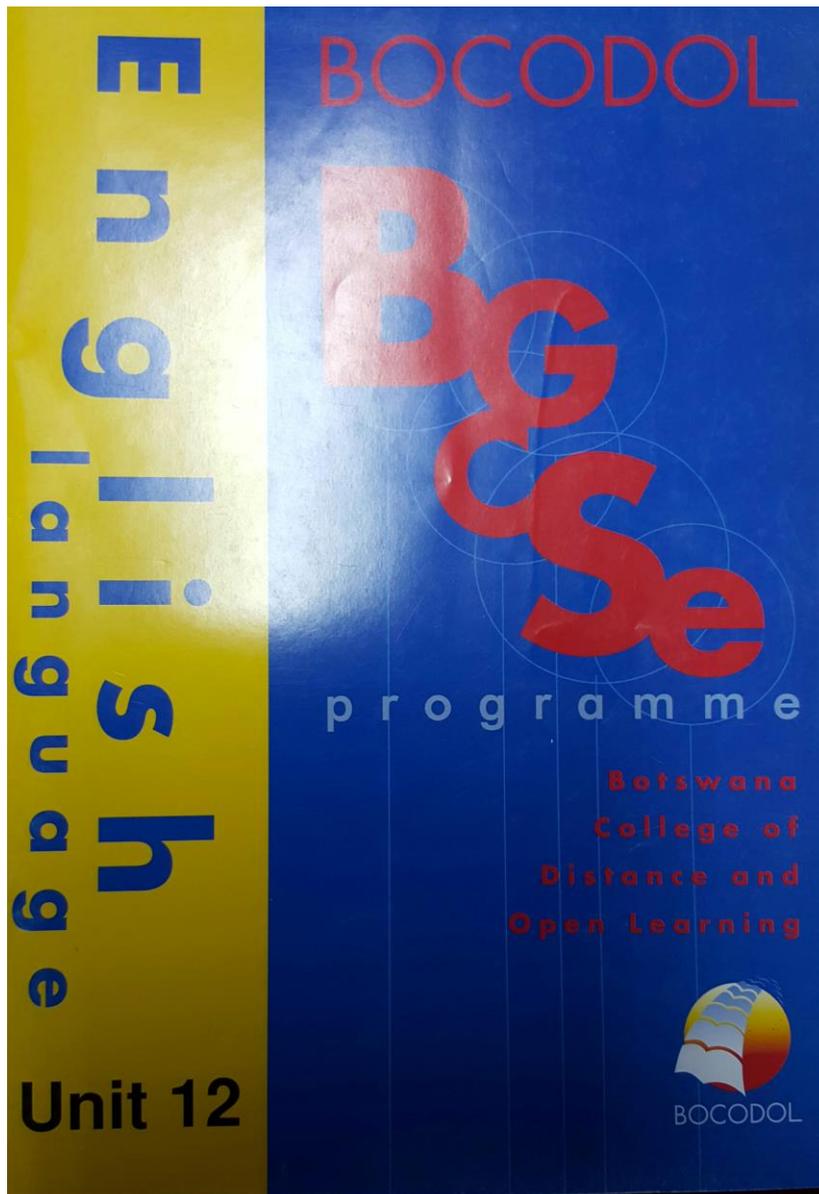
Illustration 2: Sample of Unit 12 cover page

I also evaluated the self-assessment assignments as well as the tutor marked scripts. I was mainly interested in the nature of feedback tutors gave to learners and the marks learners scored. This was important in my study as the marks obtained by learners would reflect whether the learners understood the content. I expected their level of understanding to be mirrored by the assignments.

I also went through learners' marked assignment scripts to better appreciate the nature of academic support tutors provided and questions to which learners are expected to respond. The document analysis exercise also looked at the feedback provided by tutors on learners' assignments to assess how learners' work was marked and graded. The documents I used in

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my study were primary sources of information and thus original to the problem under study (Mouton, 2001). As the one at the centre of my data collection, I was able to use some document checklists to get information I needed directly from the documents, which were my main sources of data. I had direct interaction with the study materials and learners' marked assignment scripts.

The study was not about tutors, nor learners, not even the writers of ODL print study materials *per se*, but about the accessibility of these materials to learners and their contribution to knowledge acquisition of these learners. To do justice to the study, I consulted multiple data sources. The questionnaires considered the design and development process of the modules, and they also looked at the delivery strategies of the content. I used a Commonwealth of Learning and SAIDE material development checklist to establish if BOCODOL material design and development conform to those used by other ODL institutions. The intention was to establish if the content is correct, and also delivered in ways that could facilitate understanding by learners. The COL and SAIDE checklists did not put emphasis on the linguistic factor yet language centres around all learning. For learning to take place, and for content to be accessed by learners the language used should be at their level and presented in a way that they can easily relate with. The Cognitive Load Theory emphasises chunking, using cues and using summaries when developing materials for high school learners. The two checklists also lack emphasis in using the gunning fog index which guides instructional designers on the number of words to use per sentence for easy comprehension. I ended up developing my own material development checklist as I realised that the two that I had intended to use did not adequately answer my research questions. However, I used the two to inform the development of my material development rubric, **Appendix 6**. To evaluate marked assignment scripts I developed another rubric, **Appendix 7**. The intention was to establish how learners performed in their assignments and link it to their final examination grades to see if there was a pattern. I also aimed at linking the tutor feedback to learner assessment to establish if the feedback was helpful for learners to use the next time, for them to get better grades.

The evaluation of the documents was used to verify information from participants and helped triangulate and validate my data. The documents I used also helped me establish the accuracy of content in the modules, readability of the modules, relevance of examples and other associated factors. Merriam and Associates (2002, p.13) made an observation regarding

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documents in writing that *"the strength of documents as a data source lies with the fact that they already exist in the situation; they do not intrude upon or alter the setting in ways that the presence of the investigator might. Nor are they dependent upon the whims of human beings whose cooperation is essential for collecting data through interviews and observation."* The key strength of the documents I evaluated was that they were primary sources of data and as such provided first-hand information. They could confirm information from questionnaires. Documents are also reliable as, unlike with human beings, the presence of the researcher cannot influence the data obtained from them.

3.6.2 Questionnaires

I developed three questionnaires, for each group of participants. All three questionnaires were developed and shared with colleagues for feedback before being administered to the participants. Questionnaires had the capacity to source answers as they were anonymous and completed in the absence of the researcher. Questionnaires, unlike interviews, do not involve direct observation while being completed. As such, one can never know what respondents wrote. However, the expectation is for them to provide honest reports. The questionnaires assumed that the respondents' literacy in English was moderately good. However, this was not an assurance that they could understand instructions on what they had to do. As a researcher I, therefore, had to take them through instructions after distribution of questionnaires as they were going to complete the instruments alone. The questionnaires were used to investigate mainly perceptions and attitudes of learners regarding their study materials, and to help establish if developers of the materials under review were adequately trained for the purpose. The questionnaires were also used to review the general features of the study materials such as the physical layout or structure including the font and illustrations. Mouton (2001) argues that an additional strength is that if questionnaires are properly constructed, a high measure of reliability and validity will be evident. In this case, the questionnaires were also used to establish high levels of reliability and validity.

For learners I distributed 300 questionnaires. I then engaged them and we agreed on the return dates, depending on when the instruments were dispatched. When the return day drew closer I sent each participant a reminder through mobile phone short messages and this helped the return rate. Out of the 300 learner questionnaires sent out, 176 completed ones were returned. This was a 58.7% response rate which was reasonably high. A total of 124 learners did not return their questionnaires. However, it was difficult to follow them up as I

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did not know who had responded and who had not because though the questionnaires were numbered for management purposes, there was no record linking specific learners to numbers. This was done to guarantee and maintain the promised anonymity. I had wished to work with about 150 learners, but I sent out double the number I wished for so that in case of non-responses, I would not drop too low. Therefore, 176 was even more than I had expected.

3.6.3 Interviews

During the study, I conducted face-to-face interviews with some of my participants. First I conducted group interviews, where I had a group of learners interviewed together. I had a total of six group interviews that were all audio-recorded, and twenty one-on-one interviews across all the research sites. Participants responded to questions which were presented in the form of an **interview protocol,** attached as **Appendix 16.** The interview protocol had questions that guided me on what I wanted to ask participants and it helped me ask the same questions across all the research sites bringing consistency in my questioning of participants. Learners were much more relaxed during the group interviews but were not very free during one-on-one sessions. Some had serious problems communicating in English so that each time they were asked questions they answered very briefly. I even encouraged others to respond in Setswana hoping that they would adequately respond to questions. However, this did not help much. The learners remained shy and passive during the one-on-one interviews. They lacked confidence speaking alone yet they had earlier talked during group interviews. I tried to engage the interviewees by probing for further clarity, but they still decided they would rather keep quiet. Later I engaged an assistant to transcribe interviews for me, a sample of which is attached as **Appendix 17**. This was to allow me to later validate and translate them, which I did. In both interviews I wanted learners to share with me issues relating to their study materials. Amongst their concerns were study materials that had missing assignments, materials with many errors and inaccurate information, or information that did not match the syllabus. Kvale (2007) wrote that *"in an interview conversation, the researcher asks about, and listens to what people themselves tell about their lived world … where knowledge is constructed in interaction between the interviewer and the interviewee"* (p.1). Probing, in some instances such as with more conversant learners, was done to encourage individuals to further explain and provide more details about what they had given as answers. During the study, I devised an **interview schedule** to include both the focus group and face-to-face interviews. The group discussions were also face-to-face to help establish a relationship with participants. Interview questions in qualitative research are less structured as individual

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respondents define the world in different ways, as observed by (Merriam, 2009). It was important to request participants to indicate if they were available for a follow-up interview if a need for such arose, to which all of them responded in the affirmative. With the permission of participants, some parts of the interviews were audio and video recorded for transcription purposes.

I used a small Phillips voice recorder to avoid intimidating learners. When we discussed the possibility of recording the interviews they laughed at the idea of having a tape recorder in the interview room. When probed on why they were laughing when a tape recorder was mentioned, some learners mentioned that I should not bring "Omegas" in the room. Omegas are low value radios that the government gives to the elderly to encourage them to listen to officials while talking about government programmes meant to improve their livelihoods. But they became more settled at the sight of the gadget. It was necessary to have the interviews recorded *"so that all nuances of the answers can be retained and the richness of individual statements is not lost"* (Briggs et al., 2012, p.262). I also prepared handwritten field notes to act as my backup if there was a technical problem during the recordings. During interviews I noted gestures not captured when talking such as body language, facial expressions and tone of voice. These were important aspects of the interview because, as observed by Coleman in Briggs et al. (2012), *"face-to-face interview enables the interviewer to observe visual clues ... may also allow interviewer to observe body language which might indicate comfort or discomfort, thus giving the interviewer clues on how to proceed ... interviewee forms an impression of the interviewer which may encourage rapport and improve quality of the interview."* Face-to-face interviews have also proved to provide long-lasting memories resulting from the interaction between the interviewer and the interviewee, hence information gathered tends to be richer.

During my study, I used the group interview first to create a more relaxed atmosphere, followed by one-on-one interviews to give opportunity for introverts and shy participants who could not fully participate during the group interview. In the group I worked with a number of people at the same time. The group helped participants get to know me better; many were therefore, much more relaxed during the one-on-one interviews. I, however, took cognisance of the fact that the group might present some challenges as other interviewees may be shy to join the discussion, hence may not provide adequate data (Creswell, 2007; Krueger, 1994; Morgan, 1988; Stewart & Shamdasani, 1990). My experience during this

study has, however, shown that people felt more comfortable talking in a group than alone, and that interaction among participants may be more informative than those conducted with individuals. As already mentioned, interview schedules were developed to facilitate the smooth running of the interviews. Reminders of interview appointments were sent two days before, and the last one was sent on the day of the interview, a few hours before the scheduled time. This was mainly to remind participants of the date, time and venue for the interviews.

For this study, I interviewed a total of 20 learners for one-on-one interviews and had group interviews that had a minimum of four and maximum of six participants. All twenty were exposed to both one-on-one and group interviews. The interview guide or protocol, attached as **Appendix 16,** was used during the one-on-one interview. The observation protocol, attached as **Appendix 18** was used during the group interview to assist the discussion. Some of the interviews were both audio and video recorded. This applied to all one-on-one interviews and two focus group interviews. This was done to capture moments that I could have missed during the interview. All recordings were done with consent of participants, who had signed consent letters. Both one-on-one and group interviews took approximately twenty minutes. I had thought that I would experience challenges with the language, especially in the Kang region where indigenous languages of Sesarwa and Sekgalagadi are dominant. However, all participants were comfortable with both writing and speaking in Setswana. Though English is the medium of instruction at schools, many struggled to effectively communicate using the language and this was more pronounced during interviews. Learners lacked proficiency in writing and speaking English. Though they are supposed to communicate in English, they kept on discussing in Setswana. This is despite the fact that during the meet and greet session they explained that they could speak and understand English with ease.

The interviews were conducted at the study centres where I met with the learners. I considered the meeting place ideal as learners needed places where they were comfortable, and learners had, themselves, chosen the locations. The group interviews were also carried out at the learners' normal study centres and learners seemed comfortable with the arrangement. They were also free to express themselves as they had known each other for at least one year. The participants were mixed groups of males and females. The participants responded to questions by mixing both Setswana and English, though language of instruction

is English, and despite the fact that the study materials were written in English. It was evident that participants preferred the group interviews to one-on-one. This was evidenced by the fact that many were willing to volunteer and participate in the group interview, but the same cannot be said about one-on-one. They expressed that they felt isolated and uncomfortable during one-on-one interviews.

Since the interviews were recorded to avoid missing details, I only jotted down brief notes where necessary. I had to pay utmost attention as I knew I was going to do the transcriptions. I had also bought transcribing software to help with transcriptions. This involved converting the spoken words into written text, word by word. In the end, the software was not very helpful as learners combined Setswana and English during the interviews. The main challenge of the software was that it could only transcribe European languages such as French, English, Portuguese and Spanish, but not Setswana. Thus, it was necessary to record all the interviews as, in my case, there was a combination of Setswana and English languages. The other main challenge was that initially some learners, especially in the Kang research sites, were unwilling to be interviewed individually but later consented. It is, however, important to note that this change of heart was not motivated by the researcher. Some learners had stated that they would not participate, but when I came back to meet with those that had agreed to participate, those that had initially declined came and expressed that they also want to participate. I asked them why they changed their minds and they said they did not want to be shown on television. So they had discussed the issues with their peers who assured them that I actually work for their institution and cannot take their pictures to the television. I also assured them that I could not do anything with their pictures without first engaging them, and without their consent. They then started to feel at ease each time we met. With all these elements in mind, I knew that all aspects of interviewing had to be done with integrity and honesty. Another observation was that the group interview, unlike the one-on-one, was not so easy to manage because even the shy ones always had something to say, and they would want to speak at the same time while another participant was still speaking. The group interviews were not very heterogeneous as there were many more females than males, and this impacted on the group behaviour as I had observed that females would most of the time want to speak all at once. However, we had set and agreed on house-keeping rules to maintain order, and one person was to speak at a time. I also tried to contain those who always had something to say by not giving them particular attention, and probing others to express their views. Each interview ended with a thank you to appreciate learners' time, as

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well as the information shared during the interview. The learners were also asked if they would be available to participate in case of a need of repeat or follow-up interview; all said they would be available.

Research journal

During my study I kept a research journal. The journal was largely the reflection of my experiences as a researcher. It contained all the setbacks, frustrations, strengths and successes I accomplished during the study. I also made recordings of my impressions regarding the interactions with the different participants of my study. Above all, the journal helped me document my research decisions and reflections. The journal entries also included attitudes of learners to their study material content, assignment feedback and possible success following their study using BOCODOL print materials.

In my journal, for instance, I recorded an incident that occurred during sessions. I had decided to pass by a classroom to observe the activities during evening face-to-face sessions when I observed a pattern that was consistent across my research sites. The younger learners would sit together even in the class, and then either talk about their own social issues or peruse their mobile phones. It was clear that they were not discussing school work as their modules would remain closed as they chatted. I included recordings of my journal entries in the study as **Appendix 8.**

3.7 Data collection

Research process

I successfully defended my research proposal in May 2012 and had my full ethical clearance approved in October of the same year. I finalised my data collection tools, drafts of which I had submitted with my proposal. These included the questionnaires, interview protocols and interview schedules. All these documents were shared with my support team which was made up of my supervisor and two statisticians. The necessary amendments were made and I started getting feedback on documents. The documents had to be developed in such a way that they would be able to capture the details of experiences and perceptions from participants.

Before engaging my participants, I tried my various research instruments on various people with same the traits as my participants. These included material developers, learners and

tutors from BOCODOL centres who were not from the participating sites. This was to establish if the research instruments would achieve that which they were meant to achieve: whether they were clear, unambiguous and user friendly. The intention was also to establish if the developed tools would adequately answer my research questions. The tools, as earlier mentioned, were questionnaires, interview schedule, interview protocol and document analysis templates. For my six week-feedback exercise I used 25 BGCSE learners who had been studying English using BOCODOL print study materials for a year and more as they had more information regarding the quality and content of the study materials under review. During the exercise, I visited study centres during weekdays between 1700 hours and 2000 hours to pilot my tools. These were the scheduled tutorial hours for distance learners enrolled with BOCODOL. For material developers, I had to make appointments with them. I also approached colleagues as most of them had also developed the modules before joining BOCODOL as full-time employees. As mentioned earlier in this chapter, participants were purposively selected to pick those that had traits or characteristics that suited my study. I deliberately avoided participants from the identified research sites as they were going to be part of the study. When selecting participants for my feedback on documents I was influenced by the knowledge they possess, access and their geographical proximity. These were all convenient to me, hence I opted for colleagues and learners in nearby centres.

Three of my colleagues, my supervisor and my statisticians at UP peer-reviewed the questionnaires before I administered them. My statistician recommended that I merge some questions as they seemed to be replicating each other. She also modified the questionnaire to enable it to be analysed using IBM SPSS version 22. My supervisor also raised a few questions regarding my questionnaires, which she argued, had to precisely answer my research questions. There was thus, a back and forth movement of my data collection documents between my supervisor and I, especially the questionnaires for material developers, learners and tutors.

A total of twenty-five learners were interviewed during the document feedback exercise. Of the 25 learner questionnaires sent out, 23 learners returned their completed questionnaires. I also engaged three tutors and four material developers to provide feedback on my tutor and writers' questionnaires. I met with learners at their respective study centres, and the same arrangement was made for both tutors and writers as they had earlier expressed that they wished that I meet with them at the study centres, where they normally met for tutorials.

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They all preferred a place that they considered familiar to them. This is where I was introduced by the regional staff, who worked with tutors and some of the writers. We discussed the ethical considerations and I gave them consent forms to complete if they were interested. I also gave them the questionnaires which they took to their homes to complete. We agreed that they would return the questionnaires to the centre within two weeks as I did not want to push them into returning them early.

For my feedback exercise, I also carried out the interviews and this helped me re-arrange my protocols in a more organised way, following advice from colleagues and others who participated in the exercise. The interviews lasted for between twenty and twenty-five minutes. The document feedback exercise helped me refine my questions. It also helped me confirm the adequacy of my research instruments. The activity further helped me identify ambiguous items in my instruments. Above all, I was able to confirm that my study was feasible to carry out. During the feedback exercise, my supervisor and I, together with my colleagues, agreed that attitude of interest, the variable I needed to establish with the questionnaire, would be best suited to the use of rating scales. This was because rating scales allowed assessment on a continuum, such as "never" to "always", and "strongly disagree" to "strongly agree". The rating scales could therefore, accommodate all people's interests at varying levels.

Administration of Questionnaires

The first questionnaire **(Appendix 2)** was developed for material developers. These are people who are subject specialists, and had developed BGCSE English materials used by distance learners for their studies. Material developers in this context included both writers and editors of the study materials. Before administering the questionnaire, I shared it with other people as detailed earlier in this chapter. The questionnaire for material developers was administered at the same time as that of the tutors from March 2013 to May 2014. I had a total of five material developers participating in the study and I had a 100% response rate. The questionnaire for material developers had a section with open-ended questions. This was meant to allow them to further express themselves as they wished and to address concerns that close-ended questions would have failed to address. This was because, unlike learners, tutors and material developers were only given questionnaires to respond to, and were not interviewed.

The second questionnaire **(Appendix 3)** was used to capture any concerns that learners may not be able to express during the interview sessions. The questionnaire was mainly to understand learners' attitudes and perceptions towards the BGCSE English study materials and to check if the materials contributed in any way to their academic progression. The learner questionnaire had two main sections; **Section A** covered learners' biographical information while **Section B** addressed the print study materials - covering the delivery and general content of the material, for instance, font and appearance. The learner questionnaire exclusively comprised of 14 questions where the respondents only had to tick the option that best related to her or him. Most of the questions had sub-questions and the respondents had to deal with more than 14 questions.

The third and last questionnaire **(Appendix 4)** was developed for tutors. The tutors provided learners with the necessary learning support to help them understand their module content. The tutors' questionnaire was also developed and shared for feedback on the document as explained earlier in this chapter. This was mainly to help me get the information that I needed from tutors who were in touch with the content they tutor. The tutors' questionnaire, like that of material developers, had a total of 22 questions. Like the learner questionnaire, most questions also had sub-questions. From question 1 to 21 tutors had to make ticks to options that best matched the question. However, like the questionnaire for material developers, question 22, which had four sub-questions, was open-ended as I wanted to get more details from the tutors, especially as I was not going to interview them. The tutors' structured questions were mainly on their experiences as ODL tutors, and what they wished could be done differently. This was an invitation to them to state what improvements they wished to see regarding the materials they used when tutoring. A total of six tutors were involved in my study and I received a 100% response rate from them. Tutor questionnaires were administered between March 2013 and May 2014.

Each questionnaire was sent out with a pen and pencil set that respondents kept. This was probably what motivated the respondents to complete and return the questionnaires. One major strength of questionnaires I noted was that I was able to reach large numbers of people yet did not have to go out to personally meet with them to have the questionnaire administered. We only met for the first time when I was introduced to participants by the regional staff, then during the "meet and greet" session and on two occasions when I had come for my member checking. Otherwise, using questionnaires saved my travel expenses. I

also observed that participants could respond more honestly as their responses were anonymous. Respondents were not expected to write either their names or learner numbers, or anything that could make me associate any specific participant with a particular questionnaire.

I distributed the questionnaires after explaining the ethical considerations. This was done at study centres at times when learners were going for their contact sessions on weekday evenings. Participants were given consent forms so that they could first go through them and decide if they wanted to participate or not. They would sign and complete the forms once they had made up their minds to participate. Participants who wished to continue with the study completed their questionnaires, and then submitted them at the centres as we had agreed so that I could then collect them from a central point. Other participants were given self-stamped envelopes to post their completed questionnaires just in case they were unable to go back to the study centres, but the majority managed to drop them off at the study centres. For learners, I followed up the questionnaires with interviews. The intention of using interviews was to enable me to probe for more details which questionnaires could not provide.

As a researcher, I had more defined roles, as discussed below.

3.7.2 My role as the researcher

In this study I was the central agent of data collection as is a common feature for most qualitative interpretive studies (Briggs et al., 2012; Henning et al., 2004; Welman, Kruger & Mitchell, 2005). To start with, I had to identify research sites that I could use in my study. Over and above this I had to identify potential participants that I purposively picked for my study. These were individuals who were both accessible and willing to provide me with the information I needed, but who were also *"distinctive for their accomplishments and ordinariness or who could shed light on a specific phenomenon or issue being explored"* (Creswell, 2007, p.122). I was introduced to learners and tutors by the Learner Tutor Coordinators (LTCs) for the relevant sites. In an ODL setting, LTCs are full-time employees who work directly with both learners and tutors at regions, where face-to-face support sessions take place. These initial meetings were mainly used for introductions. Then we arranged for an informal 'meet and greet' session which helped establish rapport with my identified participants so that they could provide me with good data.

For my study I used multiple forms of data collection techniques such as interviews, written documents and survey to help address my research questions. Part of my role was to develop and pilot all the necessary documentation I needed for my study including interview protocols and schedules, developing questionnaires and even developing and providing consent forms to learners for signing. I did not conduct a full pilot study. Instead, I only shared my data collection documents with people for feedback. These were people who had the same characteristics as my study population. I also conducted interviews and later validated their transcriptions to ensure that errors were corrected. I filled in the blanks which were left as the person who transcribed the interviews was not present during the interview sessions, and as such was not familiar with some issues discussed and thus did not capture them. I also translated the transcriptions. As a researcher I administered questionnaires and later analysed them to make sense of the data. I did the analyses of documents under review, as my main primary sources of data.

As a researcher, I consistently reminded my participants about their ethical rights of voluntary participation, and that they could withdraw from the study at any time if they so wished. I also shared with them the purpose of the study and all the procedures that I was going to use for data collection. As an insider I was careful to avoid researcher bias and not to skew information about participants. To guard against this, my colleagues became very resourceful in peer-reviewing not only my data collection instruments but my interpretations as well. In this study, I played the role of the hermeneutic researcher. As a hermeneutic researcher I engaged and dialogued with my participants, and then interacted with available text to increase understanding of issues. I was rigorously involved with both data collection and its analysis and interpretation to get a fuller understanding of what participants really meant.

I fulfilled the UP ethical requirements in October 2012, as per **Appendices 14** and **15**. I interviewed and recorded my participants and this enabled me to interact with my respondents during the data collection exercise. My data were collected from the institution that I work for. As such, accessing the field was not a problem. I had requested permission from my CEO **(Appendix 9),** which was granted on condition that I share the findings with the College **(Appendix 10).** I was, however, worried by the idea that participants, especially learners, would probably be intimidated by the fact that I was a staff member and would not

be free be critique the study materials as they would do with an outsider. In my letter of request to conduct my study in the College, I had explained that my findings could possibly help improve the practice of how we designed and developed our study materials. During my study I exercised the highest level of professionalism and engaged with the Centre for Open Schooling. This is the Centre that offers BGCSE programme under its menu of school equivalency programmes. I shared with them that my study for them to appreciate that the findings would be used to help improve practice and not to blame anybody. As a researcher, my role was also to detail the purpose of my study before each interview session.

The next section details the data analysis of my study.

3.8 Data analysis

My data analysis processes will be discussed in detail in the next chapter. However, I consider it pertinent to lay the foundation of the discussion and analysis here as these were mainly informed by the methods I used for data collection. My study used a mixed methods approach. Stake (1995) wrote that *"data analysis is a process of unlocking information hidden in the data that the researcher transforms into meaningful and useful information"* (p.71).

For my document analyses, I evaluated the BGCSE English Language study module. First of all, I studied the Commonwealth of Learning (COL) and South African Institute of Distance Education (SAIDE) material evaluation forms. I then realised that both forms could not adequately address my research questions on the design and development of ODL study materials especially the issue of language. I used the two forms to develop my own material development rubric, **Appendix 6,** as already discussed. The rubric considered a number of factors in the analysis of the materials. First of all, the rubric had criterion or descriptors which were evaluated. These included the physical appearance of the study materials, layout and structure, illustrations, user friendliness, language, content, interactivity and teaching strategies used. Each criterion or descriptor had performance indicators against which the modules were evaluated. Evidence of conformity or lack thereof was also considered and the quality measure was used to provide an overall indication of whether the study material conformed to the identified criterion or not. I awarded the quality measures scores to represent their level of conformity or lack of conformity as follows: **0, failed to meet**

criterion, **1** was **satisfactory**, **2** was **marginal,** **3** was **acceptable** and **4** was **meets all criteria**. Once the data from my three data sources were available, and interviews had been transcribed, I started my data analysis. I had validated the transcriptions and could relate with them much better. I used open coding which allowed me to set my data from the different sources apart. Then I grouped the similar findings together and labeled them. These gave me codes and from my transcripts I identified my categories by going through my transcripts line my line. I allocated codes that described the concepts so that it would be easy for me when working on data reduction, where I had to sort, organise and decide on which data to discard and which data to summarise. Some examples of codes that emerged from my transcripts included unprepared tutors; wrong materials; little content; little time; easy assessment; lack of revision among others. From the document analysis I had codes such durability, content list, visual appeal, readability, glossary to explain difficult words, low frequency words, grammatical accuracy, alignment with curriculum, use of illustrations; signposting; content load; time allocation; diversity of learners and others. As I created codes, I could immediately saw that there was a lot in common between my data as some concepts began to recur. I then observed that the concepts that were recurring during coding meant that they were related. I then grouped all the related concepts and came up with categories. For instance, all concepts that were related to physical appearance were grouped together and placed under the sub-heading of physical appearance. I placed all those that related to content under the content category. All those concepts that had to do with language were placed under the heading language, those that promoted isolation, such as lack of collaborative and group learning, were placed under the umbrella theme of isolation. Those that contributed to content deficiency were all placed under inaccuracy as a key theme. Out of this coding and categorising emerged some three themes: inadequacy, inefficiency and imprecision - which will be discussed in detail in Chapter 4. I then discussed the findings to complement my quantitative data - which was informed by the responses from the questionnaires.

For my quantitative data collection I used a closed-ended questionnaire as earlier explained. Upon receiving the completed questionnaires, I checked that the respondents had answered as requested. I then sent them to my statistician who developed a computer report for me using IBM SPSS, version 22. After receiving the feedback from the statisticians, I had to go through the questionnaires to cross-check if all items had been captured correctly. I then worked on presentation of the information derived from the data. This allowed me to display my data in more organized format and enabled me to present it in more meaningful ways

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such as tables, figures and graphs. This I did to allow easy interpretation of trends and patterns.

The interviews were tape-recorded. I engaged an assistant to transcribe them. This assistant signed the declaration form as per the ethical requirements, **(Appendix 19),** confirming that he would abide by confidentiality and privacy clauses upholding the ethical research requirements. Engaging an assistant to transcribe my interviews worked to my advantage as I was later able to validate the transcriptions. Validating the transcripts involved my reading through the transcripts whilst listening to the tapes. This helped me to analyse my data closely. When validating my transcripts, I also made sure that the research assistant wrote the interviews exactly as they were conducted. I established that what was transcribed was original and that the content remained as true to the original interview as possible.

I went back to my interview questions to check if all responses were the answers I needed for my research questions. I used different colours to manually code the different responses. I realised that all the answers responded to the questions I had asked during the interviews. However, I also noted that as much as all responses were relevant to my topic, some were not essential as they did not answer my research questions. These, I did not discard but placed under a heading I called General Observations as I noted that although they did not address my research questions, they remained important to my study. I used different colours for coding and this helped me establish my categories. These were formed by what I considered to be related or very close ideas. All these activities revealed that my data analysis was inductive. Later I manually coded the transcriptions to establish patterns and themes, which I discuss in detail in Chapter 5.

It was necessary to establish trustworthiness of my study. The section that follows details how I established my study's trustworthiness.

Trustworthiness

Maree (2012) defines trustworthiness as *"the way in which data are collected, sorted and classified, especially if they are verbal or textual"* (p.140). Creswell et al. (2010) place emphasis on the importance of research results that remain the same even when obtained on different occasions. This will mean that the findings of the study are valid. Validity, according to Mayan (2001), is the accurate presentation of a particular context or event as described by the researcher.

The fact that I used multiple techniques for data collection and analyses helped establish both validity and trustworthiness of my findings as the different methods strengthened each other. I shared the data captured with my participants in order for them to confirm if what had been recorded reflected their earlier responses. Maree (2010) advises that as a researcher one has to ensure that the data collected is valid by taking cautious measures, such as having their questionnaires reviewed by experts to facilitate internal validity, and using rich descriptions of participants and contents to facilitate external validity (generalisability). For internal validity I used member checking, where data and findings were verified by participants that were originally involved in the study. Member checking involved validation of analyses by respondents in the study. In my study, I went back to some of the people who had initially participated in the interviews, and who had confirmed their availability in event of a need for further interviews. I shared with these people preliminary findings of my study, which they endorsed as correct. During member checking, participants were able to recognise their experiences in the researcher's interpretation while a few suggested some fine-tuning to better capture their perspectives. Other than member checking, I used other strategies in this study to enhance and establish trustworthiness, and increase generalizability. The strategies I used are:

Triangulation enhanced credibility, validity and reliability of the study. Triangulation involved using different data collection methods. In my study, triangulation was established through the use of multiple methods of data collection as well as using multiple sources of data. Merriam (2009, p. 215) postulates that *"triangulation using multiple sources of data means comparing and cross checking data collected through observations at different times or in different places, or interview data collected from people with different perspectives or from follow up interviews with the same people.*"

Peer review and debriefing - I shared my results with my peers and they later asked questions where they thought something was unclear. They also made comments as necessary; this was a great help as they looked at my study from a fresh perspective.

Audit trail - I maintained an audit trail to ensure dependability of my study. Multiple data collection strategies ensured triangulation, (Creswell, 1988; Leedy & Ormrod, 2001; Lincoln & Guba, 1985). An audit trail details how data were collected during the study. It also

establishes how categories were arrived at, as well as how certain decisions were arrived at in the study. The audit trail of this study was largely informed by a journal that had recordings of the processes undertaken during the study. The audit trail also outlines in general terms how the study was conducted all the way to data analysis and interpretation. This is key to any study as it can allow for any researcher to repeat the study exactly as it was carried out, if necessary. Boyer (2003) advises that to facilitate replication of a study, one has to provide enough information regarding the study. This, he argues, will enable a third party who wishes to replicate the study to fully understand and use the findings without asking for any input from the researcher. He argues that one should be able to *"follow the precise path taken by a previous researcher and then improve on the data or methodology in one way or another,"* (p.72). To adequately leave enough details to ensure replicability, I employed some strategies to ensure that the process of my study remains consistent. I outlined the roles that I had to do, as the central agent of data collection. I also used the same protocols to ensure consistency of my instruments.

Use of rich, thick descriptions – For my study I used rich, thick descriptions. This helped me establish external validity of my findings. The use of rich, thick descriptions involved using participants' own words. I used quotations to represent thick descriptions as I quoted participants verbatim. This helped provide rich details to facilitate easy understanding and makes issues much clearer to people who did not take part in the study. By using rich thick data I wanted people who would use my study by providing appreciate how I reached certain conclusions by providing sufficient details.

Reliability in my study corroborates the definition of Creswell (2009, p.209) in which he said it is *"the stability of responses to multiple codes of data sets."* The data for the study came from the sources unorganised and in separate bits and pieces (Leedy & Ormrod, 2010, p.30). These data were all obtained from primary sources, for which reason I considered it truthful and valid. However, as discussed earlier, I had to use different techniques to ensure that the data were valid. *"Reliability is concerned with the findings of the research and relates to the credibility of the findings"* (Maree, 2012, p.145).

The table below summarises strategies I used in this study to ensure trustworthiness.

Table 9: Strategies used to ensure trustworthiness

Construct	Strategy used
Credibility	Extended stay in the field Keeping field journal Member checking to establish accuracy of the data Peer review and debriefing Triangulation Using primary data sources
Internal validity	Study questionnaires were reviewed by experts
External validity	Used rich descriptions of participants, such as quotations
Reliability	This was established by triangulating the data. Triangulation, which involved the use of various data collecting methods, helped establish data trustworthiness. Reliability involves the consistency with which an instrument brings the same results
Member checking	Convened group meetings in GSS and Matsha and shared findings with them, which they endorsed as representing their views.

This study was mainly based on evaluating BOCODOL study materials and other documents that facilitate learning. However, I also had BOCODOL learners, tutors and other ODL practitioners participating in the study. I used different methodology to collect data from my sources to answer my research questions as summarised on table 12 below:

Table 10: Summary of research design and methodology

Data collection method	Data collection tool	Source of information	Research question
Document analysis	Own rubrics	Study materials Marked assignment scripts	To what degree does the design, development and delivery of ODL study materials facilitate learner's access to, and mastery of content? What are the key features of printed materials provided to secondary school level ODL learners enrolled with BOCODOL?
Survey	Questionnaires	Material developers Learners Tutors	To what degree does the design, development and delivery of ODL study materials facilitate learner's access to, and mastery of content?
Interviews	(Interview schedules Interview questions (guides)	Learners	To what degree does the design, development and delivery of ODL study materials facilitate learner's access to, and mastery of content? What are the key features of printed materials provided to secondary school level ODL learners enrolled with BOCODOL?

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3.9 Conclusion

In this chapter, I described in detail the research design and methodology used in my study. I noted that for my data collection, both quantitative and qualitative methods were used, though qualitative methods such as interview schedules and document checklists were more dominant. For the quantitative method, I used the questionnaires which were analysed using IBM SPSS version 22, and with support from the University statisticians. Creswell (2007) notes that *"qualitative research does take time, involves data analysis, results in lengthy reports, and does not have firm guidelines"* (p.51). I have noted in this chapter that I had an extended stay in the field for my data collection, which lasted for twenty months from November 2012 to September 2014. In the next chapter, I present my data, and suggest findings from the data collected as detailed in this chapter.

Chapter 4: Data presentation, analysis and discussion of findings

4.1 Introduction

Henning et al. (2004) explain data analysis as an activity which involves making sense of the collected information to facilitate and inform meaningful interpretation. That is why this phase in the research process is generally referred to as the stage of making meaning from the data collected during the study. In this chapter, I present the data and provide an explanation in order to answer my research questions:

(i)   What are the key design features of printed study material provided to secondary school level ODL learners enrolled with BOCODOL?

(ii)   To what degree does the design, development and delivery of ODL study materials facilitate access to, and mastery of content?

4.2 Design and use of instructional materials: Key role players

My study had three main role players. These were the material developers who designed and developed the content, the learners as end users and the tutors who facilitated the learning process by offering learners academic support as discussed below.

4.2.1 Material developers

This study involved administering a questionnaire to five material developers of ODL BGCSE English study materials. The purpose of the material developers' questionnaire was mainly to understand perceptions they had about the material development process – whether they were trained, whether they had the necessary resources such as syllabi, and whether they considered the current materials able to contribute to learner retention, motivation and academic progression. The five material developers who participated in the study were aged between 46 and 50 years. There were four females and one male. Four of the five participants spoke Setswana while only one spoke Kalanga as their mother tongue. Four of them indicated that they could read, write, and understand spoken English while one did not respond to this particular question. There was one respondent who was also an experienced ODL writer, who had even published content for ODL. Four material developers preferred English as a language for material development while one did not respond.

All the material developers had joined BOCODOL after responding to an advertisement and were adequately trained to develop ODL study materials by the divisional staff responsible for material development at the College. Material developers were professionals in their teaching jobs, but not in material design and development though they were tasked with the actual development of content that made up the ODL study materials. This, therefore, meant that after their recruitment, the institution has to organise workshops to train them on how to design and develop effective distance and open learning materials. This included the fact that the materials should "converse" with the learners and the tutor's presence should be felt in the materials. Material developers were exposed to one or two days of training at BOCODOL and this resulted in inadequately trained and unprepared material developers. The end result would be failure to develop high quality, interactive materials. The material developers were expected to use the active voice and engage the learner so that he or she should not feel isolated while using the ODL study materials. Material developers were also content experts and had the overall authority on the content that the learners had to study. This content had to ensure that learners progressed with their studies. The material developers' training was supposed to be guided by the two theories that informed this study: the Cognitive Load Theory and the Theory of Instructional Dialogue, which I discussed in detail in sections 2.2.1 and 2.2.2 of Chapter 2. Due to the short training time, the theories are hardly ever adequately addressed. As people who determine learners' content, material developers were, therefore, most important in the material design and development process as their materials were a direct barrier to learners' academic success. They needed to carry out research to produce up to date study materials, with accurate and relevant content. The material developers did both the writing and editing of materials and could provide leadership in the development functions such as:

- designing and developing content
- designing graphics/illustrations as appropriate
- providing in-text activities and feedback
- developing self-assessment exercises with answers
- generating tutor marked assignments with marking guides
- providing for integration of audio and other forms of media
- listing resource materials for further reading
- compiling other resource materials that would facilitate easy understanding of content such as resource books.

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Material developers included content writers and editors, who were also subject experts in the field. After the writing process the content editors went through the manuscript to check if the content was both accurate and up to date. If not, they had to add what they felt had been left out. Some of the key roles of content editors, as outlined in the BOCODOL course manual (2008) included:

- critiquing and correcting the content created by the writers
- proposing and making changes (where necessary) to the draft materials
- checking the appropriateness of the learning activities, exercises, assignments and accuracy of feedback given
- checking the effectiveness of the graphics/illustrations and proposing improvements where necessary
- correcting language errors in accordance with ODL house style such as the conversational style that has to be used to break learner isolation.

Adapted from: BOCODOL Course Development Manual (2008) and Rowntree (1990; 1992; 1994)

ODL learners depend on their learning materials for their academic progression. Due to this reality, Rowntree (1994) argues that materials should be well written and presented. He further advises that such materials should take different forms such as books, audio-tapes and video-tapes (Rowntree, 1994). Rowntree (1994, p.9) contends that ODL materials are *"materials put together in such a way that users can learn from them satisfactorily with less help than usual from a teacher ... as they contain a teacher in them."* For my study, material developers responded to questionnaires which aimed at establishing how they developed the materials, and whether the material developers conformed to the document checklist that I had designed, **Appendix 6**, to evaluate ODL study materials used by learners enrolled with BOCODOL for the BGCSE English course.

4.2.2 Learners

The second group of role players that participated in my study were the learners. These were people who used the materials for their studies, as well as to ensure that they progressed with their studies. The learners were involved as respondents to the questionnaire, which sought to establish their perceptions and experiences of studying with the ODL materials under review, as well as to establish whether the materials could possibly contribute to their academic progression. From both the interviews and questionnaires, learners gave various reasons for

studying with BOCODOL. Lesedi explained that *"I want to improve my results from previous school."* The same sentiments were shared by Xuma from Matsha community centre who enrolled *"to upgrade my results." "I haven't done well in some subjects,"* Jane, also of Matsha centre explained as her reason for studying with BOCODOL, while Lone explained that he studied with BOCODOL *"to re-sit for the examinations."* One participant in Linchwe explained that *"I did not do well in my studies."* Some of the learners shared that they enrolled with BOCODOL to improve their grades. They trusted that BOCODOL could help them with their intention. The confidence learners had in BOCODOL gave them trust that they could study with the institution and progress. The learners came from diverse environments, cultural backgrounds and socio-economic backgrounds. However, they all used the same study materials and sat for the same assessment at the end of the year. Learners were the mirror that I believed could give me a true reflection of the ODL study materials. Open and distance learning institutions provided academic opportunities to people who would otherwise not be able to enrol in conventional schools. The learners who participated in my study were mostly adults whose age varied between 17 and 55 years, with the mean or average age of the group as 24 years. This is the common age range across all subjects at BOCODOL (BOCODOL, 2011).
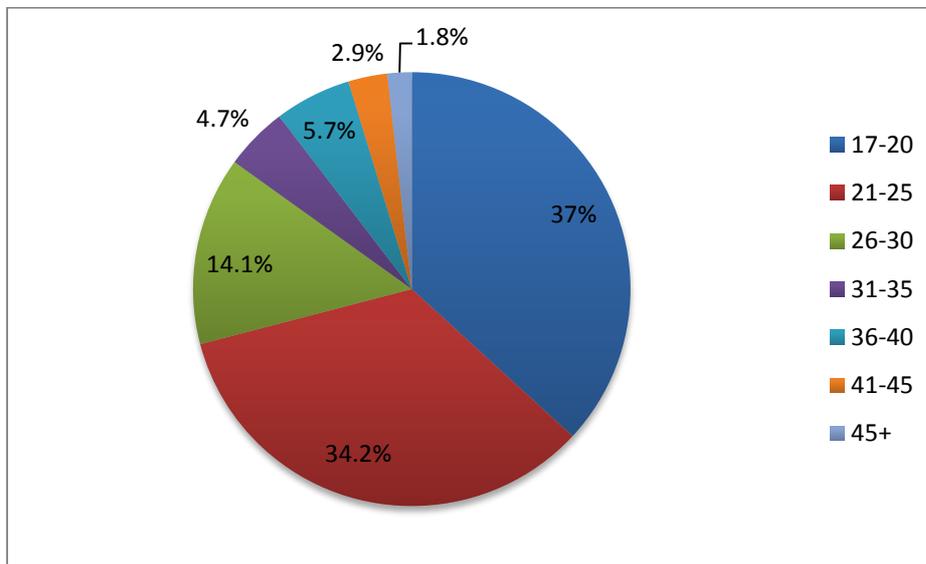
Figure 1: Age of participating learners

Female learners represented 57.4% of participants. In most social contexts, females take care of the household chores and siblings. These responsibilities might, therefore, have possibly affected their studies negatively in the past, hence majority is now enrolled to study with BOCODOL. Seventy-five male learners (42.6%) participated in the study.

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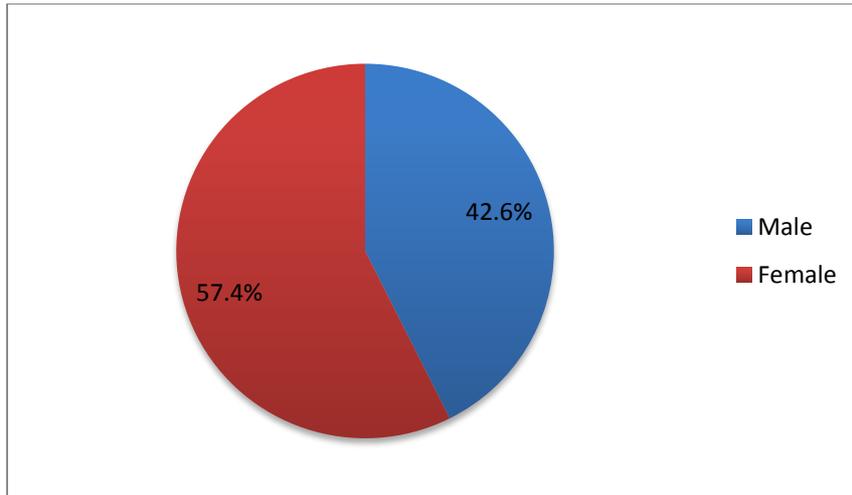
Figure 2: Gender of participating learners

All the participating material developers and tutors were employed at the time of the study. One hundred and two learners were unemployed, representing 58% of the sample. The occupations of other participating learners are represented by **Figure 3** below.
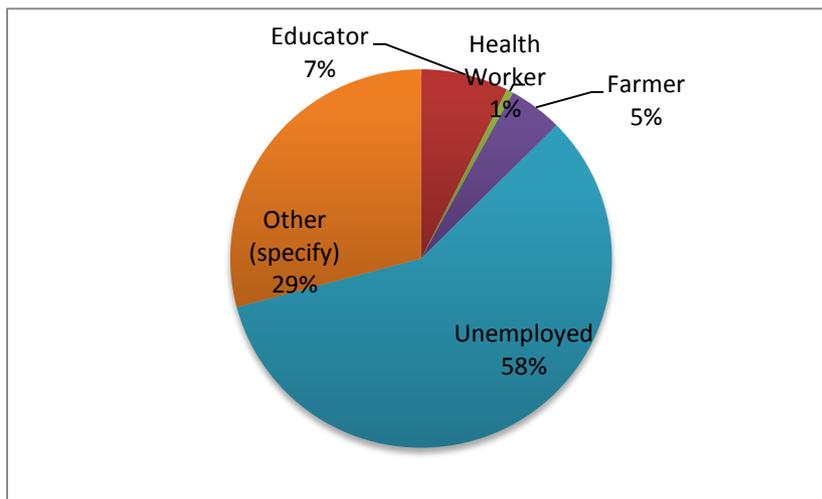
Figure 3: Employment status of participants

One would assume that since the majority of participants were unemployed they would have had ample time to study, do their household chores, and in the end, perform well in their studies. One would also believe that learners would have time for their school work such as reading their study modules and doing their assignments. Participating learners had all been enrolled with BOCODOL for at least one year at the time of the data collection, as shown in **Figure 4** below.

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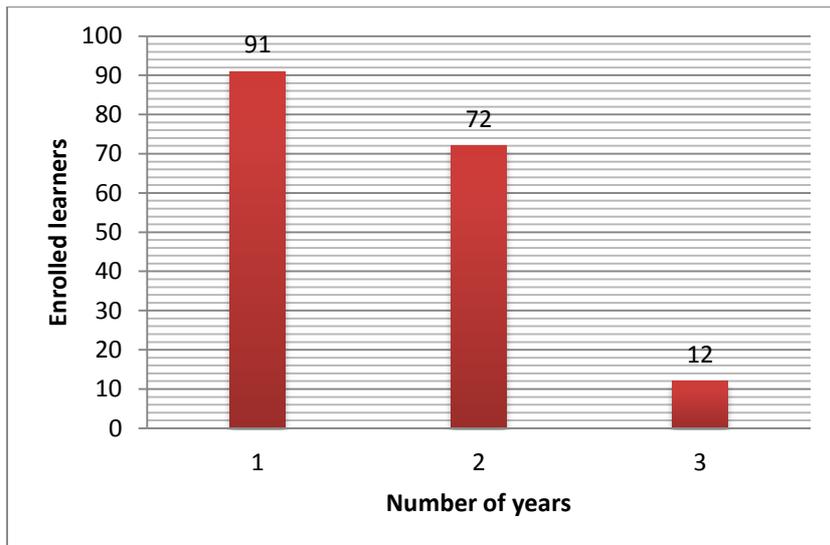
Figure 4: Length of study at BOCODOL

My assumption was that over twelve months of studying at BOCODOL they would have interacted with the study materials under investigation sufficiently for them to make a meaningful contribution to the study. At the time of the study, out of the 176 learners who participated, 91 had been studying BOCODOL for 1 year, 72 for 2 years, 12 for 3 years, while one did not provide her or his length of study at BOCODOL. The learners had enrolled to study with BOCODOL mainly to improve their grades. As such they were repeating BGCSE English course at BOCODOL, having studied it at conventional schools.

I asked learners about the language they would prefer to use during their tutorials that would best help them understand the content in their study materials. They had options of English - which is the official language, Setswana – which is the national language, and they were given an option of "other" so that they could be free to state their preferred language if it was neither English nor Setswana. Out of the 176 respondents, 3 respondents (1.7%) did not respond to the question, 129 (73.3%) learners preferred English, 32 respondents (18.2%) preferred Setswana while 12 respondents (6.8%) stated that they preferred languages other than Setswana and English. These were Sekalaka and Sekgalagadi. When asked in which language they preferred to be tutored, the majority preferred English. One participant in Matsha pointed out that *"A kere English ke official language."* (Isn't English the official language)? In my view, thirty-two respondents who preferred to be taught in Setswana and another 12 who preferred other languages other than Setswana and English represent many other "silent" learners who do not want to be taught in English for various reasons, yet the system continues to use English as a language of instruction.

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To some of these learners, they have no option but to use English as it is the official language of the country and thus of instruction.

4.2.3 Tutors

The third and last group of role players were the tutors. Sampson (2003) contends that the tutor remains the major source of student support, other than study materials. In my study, tutors were the professionals that were subject experts who offered academic support to distance learners during the face-to-face contact sessions. Learners met at designated study centres, mainly schools, for one hour every week in the evenings to meet with their tutors. This is the only time learners have to meet with their tutors for face-to-face support. Tutors also marked learners' assessments and offered the necessary guidance regarding how they should respond to the assessment questions for them to succeed during their examination. The tutors were the "middlemen" between the study materials and the material developers. They were subject experts who could judge the quality of the ODL materials, and whether they remained relevant. I had six tutors: two males and four females participating in my studies and I received 100% response rate from them. Of the six tutors, three spoke Setswana, two spoke English and one spoke Kalanga. One tutor had a Diploma in Secondary Education, one a BA in Humanities, while four had post-graduate qualifications.

The tutors' main occupations are captured in figure 5 below.
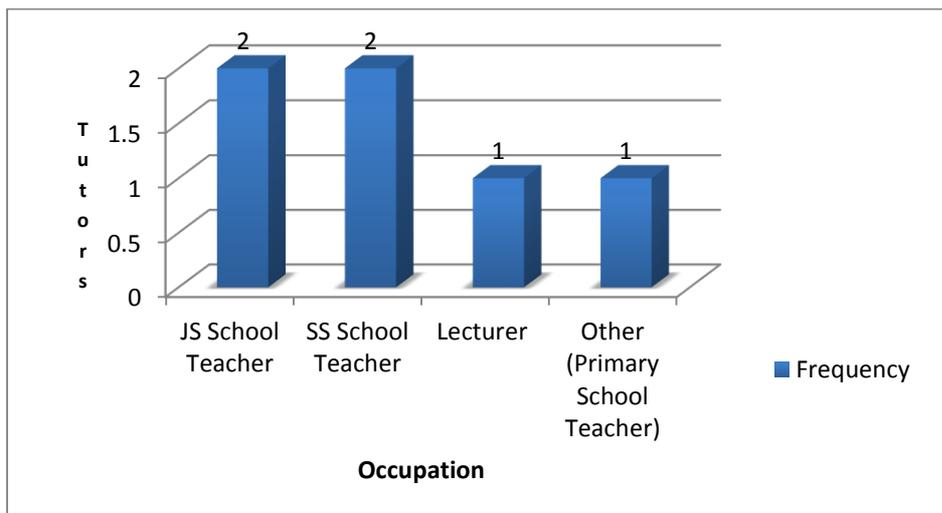
Figure 5: Tutors' main occupations

The tutors' period of service at BOCODOL varied between two and seven years.

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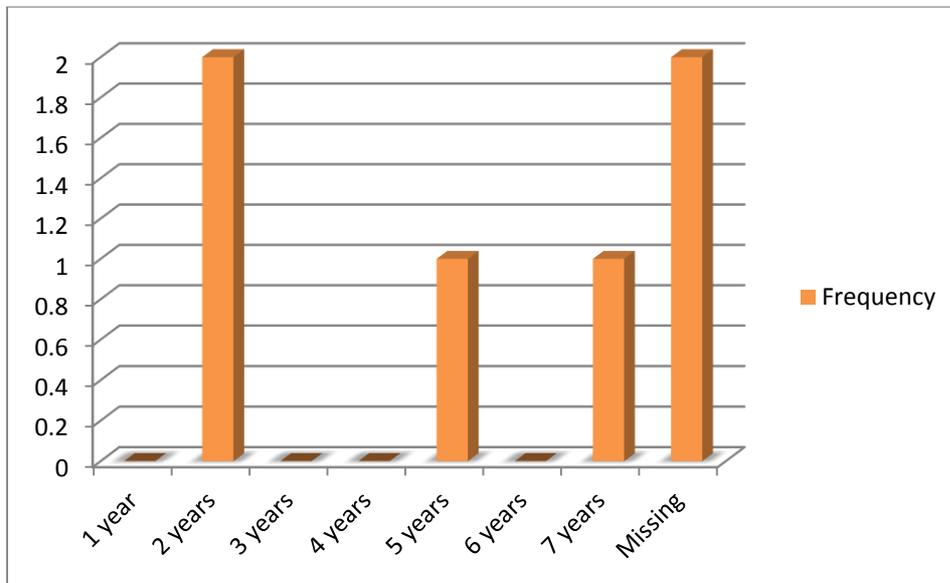
Figure 6: Number of years tutoring at BOCODOL

I asked the tutors the languages they would prefer to use when conducting tutorials: four preferred Setswana while two preferred English. Probed further, two tutors shared that they actually used Setswana to help learners understand the content better. I noticed similar perceptions between tutors and learners regarding preference of language to be used for tutoring. Learners had also preferred Setswana as forty-four were clear that they did not want to be taught in English, and now four out of six tutors preferred in Setswana. This brings the reality that people are made to learn in the language that they do not prefer, and this might impact on their learning as language remain a critical component in communicating effectively in any learning environment.

Section 4.2 has just summarised key role players of my study. These are people who provided me with the information that I used to validate the data I obtained from documents, my main unit of analysis. The next part of the study looks at the evaluation of study materials, which provided the necessary data for my research questions.

4.3 Analysis of instructional materials

In this study, document analysis was the main data gathering technique used. The main documents that I evaluated were the English language modules used by secondary school level learners to study English language. These learners study on their own, thus need for materials to be interactive. Self-assessment activities are in-built in the materials, but tutor marked activities are given as a separate document with each module. The study units I evaluated have been described in details in section 3.6.1. As earlier explained, interviews and

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questionnaires were only used to support and corroborate the information I obtained through document analysis. Document analysis is a qualitative research method that involves evaluating or assessing documents in a detailed fashion according to certain given criteria. For my study, document analysis involved close reading and evaluation of BOCODOL study materials to check if there were features that made the materials sufficiently learner-friendly to reduce the isolation experienced by learners, and thus enhance active learning. I used BGCSE English syllabus to establish if the material developers have adequately addressed the course objectives. I also went through learners' marked assignment scripts to better appreciate the nature of academic support tutors provided and questions to which learners were expected to respond. The document analysis exercise also looked at the feedback provided by tutors on learners' assignments, as detailed in section 4.3.6 of this chapter.

The next part of the study looks at what I discovered from my document analysis after applying the analysis criteria (**Appendix 6**) which I designed and developed specifically for this study. The findings were triangulated with data from the other two data sets: questionnaires and the interviews. For my discussion of findings, I have merged and collapsed various criteria used during my document evaluation. This was because they belonged to the same category. For instance, physical appearance, layout and structure and illustrations would all be considered technical, hence fall within the "technicality category". Language and content belonged to the "language category" while user friendliness, interactivity and teaching strategies belonged to the "communication category."

4.3.1 Physical appearance: aesthetics

Under this heading, I evaluated whether aspects of the study materials had the ability not only to attract or draw learners' attention, but to also sustain to facilitate learning. Performance indicators discussed under this criterion included whether the title was clearly written; whether the title was appropriate for the content; and whether the cover page was coloured and attractive. **First impressions** - I approached the presentation of findings from the point of view of the user, that is, the learners, and thus start with what they would first encounter upon receipt of their study materials. Upon opening their package, learners ought to have **12 booklets** of 75 pages on average. They need to see a **content list** conforming to the **thematic development** that the material developers were to have followed. This was not evident in the study materials. However, the **binding** is strong and **durable** and there is no known history of materials getting damaged as a result of the type of binding used. The book is **light** enough and conveniently

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designed to carry around, and this view was corroborated by four material developers who responded that materials were easy for the learner to carry around if they so wished, while one was undecided. The main challenge with the study materials was that they were packaged in 12 individual study modules. During the study, learners shared that at times they sat for examination without having studied all the modules as the institution rarely gave them all the 12 modules at enrolment. Learners also strongly felt that their study material was unnecessarily divided into many modules that needed to be combined. It is important to note that the issue of learners receiving **incomplete study packs** does not directly relate to appearance. However, it has been a recurring problem and serious cause for concern that at the start of each academic year, learners are given incomplete packs for their courses. The problem of learners getting incomplete study materials was very prominent across all research sites. Some learners had to use old note-books from their former schools. This is a negative start that could immediately discourage the learners and can turn their anticipation to disappointment. Learners come to BOCODOL with high expectations, and their emotions can be affected by this negative start to the course. Some learners highlighted that they hardly ever received complete study material packs. These included both modules and audio cassettes that are used to complement the modules. This, they said, meant that they had to skip parts that involved listening to the audio. Omitting listening exercises will later impact on learners' progress. One way to gain language proficiency is to be able to listen to proficient language speakers. Now when learners miss the audios, they miss on the opportunity to listen to more proficient speakers of English language. Learners also shared that assignments that had to be marked by tutors were also missing and these had to be photocopied from other learners.

The figure below summarises the time learners normally had to wait to get materials that were missing from their study packs.
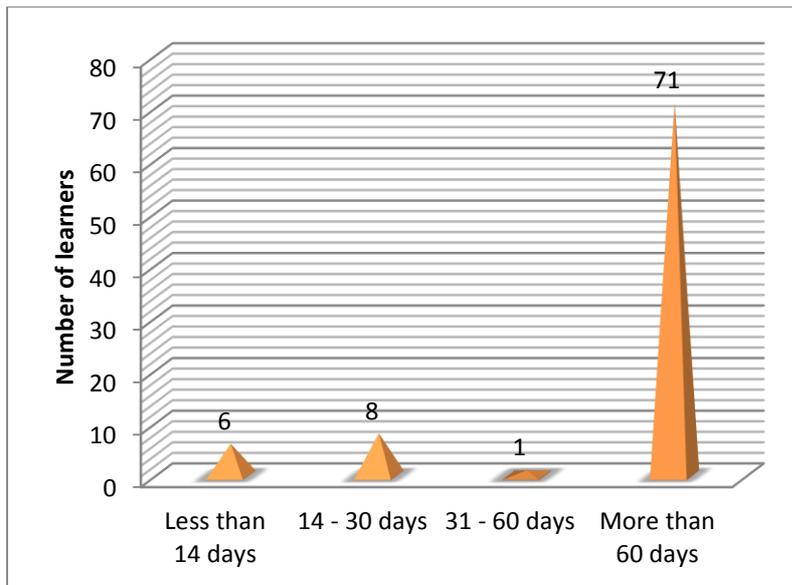
Figure 7: Waiting time for undelivered materials

Sean from GSS shared that *"I used my previous books and I used to go to the library."* This was a trend in all the research sites. This meant that learners got fragmented content to use for their study. Other learners shared that most of the time they borrowed study units from those who had them, to photocopy for themselves. In my evaluation I also looked at the visual appeal of the study materials. The cover page itself is coloured. Three material developers believed that materials were attractive to the eye, one was undecided while one disagreed. The cover page for the reviewed study materials is bright blue and yellow, as shown by photographs of cover pages under section 3.5.1. However, learners shared that other than the cover pages, materials were dull and needed to be given some colour to make them more colourful and appealing to the eye. The study materials have no title written on the cover page. Instead, the title is written inside the material. The titles are not self-explanatory and need more detail about the content, except for Unit 1 on "Entertainment". Insufficient reference is made to the aim of the course. Course aims are stated on page (i) of Unit 1 but are not all covered by the course content.

Layout and typography – Another aspect I considered under the physical appearance of the study materials was the layout and typography. This aspect included font size, font style and technical accuracy of the study materials. I looked at whether headings were varied and whether icons were consistently used. This aspect of layout and structure also considered whether points of emphasis were clear in the study materials. The study materials had been written using Helvetica and Times New Roman fonts, size 12 for text. The problem was 1.0 spacing which made the text cramped for an ODL learner. Below is an example showing layout and typography

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from Unit 1 as it was from material developers, before being typeset. The example shows that material developers did not conform to the expected layout of material design and development.

Varied headings

Inconsistent spacing of headings

7.0 Punctuation and Paragraphs

7.1 Introduction

Dear Learner, have you ever wondered what it's like to be alone in a jungle without any sense of direction? How do you feel when you go alone to a strange place for the very first time in your life? I think you probably feel confused and lost and completely out of place. Well, an essay without punctuation marks and paragraphs is a bit like a jungle. It's a continuous flow of words, without any indication of when to stop and when to carry on. Anyone reading such an essay will quickly get lost and give up in confusion.

Question:	**Why do most teachers dislike marking essays?**
Answer:	**Because they have to spend so much time lost in a jungle of words. I've given a secret away, but I think it might help you appreciate what I mean.**

In Section B I'm going to help you make sense of your written work so that it isn't like a jungle but like an ordered landscape.

7.2 Punctuation Marks

It's necessary to use punctuation marks so that we can understand our written work better. Let's look at some of the most important punctuation marks. They will appear in the brack.ets after their name

Cramped text; with 1.0 spacing. There is not enough white space

Inconsistent spacing of headings

Typographic error

Most learners, especially those from rural and remote areas use candles for lighting. Some, in cities, who do not have power in their houses but use street lights for studying and the cramped content was a disadvantage to such learners. The headings were, however, varied. The main headings had font size 20, the ones following them had 18 and so on. Thus, there was clear differentiation between headings and learners could easily differentiate a main heading from a sub-heading. Providing headings and sub-headings allowed learners to know what they would be

studying under each section. Though content did not match the Unit title, it did match the headings that were provided.

In instructional design material developers use advance organisers to provide information about what will be discussed in a lesson before the actual learning and include such things as icons, and activity template. This is done to help learners to be able to familiarise themselves with the new information, and to be able to know what to expect next. In the study materials I evaluated advance organisers were not used. For instance icons were not used in the materials, except for sections where learners had to pause to listen to an audio-tape, which were also missing from the study packs.

The next issue I discussed was language. With the materials in their possession, learners would now have to interact with the content. For learners to access the content it has to be written in the language that they understand and can communicate well with. To establish whether the language was accessible to the learners, I used certain indicators that explained the accessibility of language to ODL learners, and evaluated their effectiveness in the materials under review.

4.3.2   Language: accessibility

This part of the evaluation of study materials sought to establish if the language used in the study materials was clear and unambiguous, and whether the language used was at the right level for the programme and at the right level for a non-native speaker of English. This aspect also sought to establish if the study materials used the 1st person when communicating with the learners and whether the content was written using active voice, with varied tone. The other aspect considered under the language criterion was to establish whether the learners were provided with a glossary explaining all new concepts and terms, and whether the study materials had been edited for grammar mistakes.

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In most of the text, use of active verbs and first person: Ï", "we", "us" is missing

Should have fully engaged learners by using active verbs

(c) Support sentences

Support sentences, which usually follow the topic sentence, can also be called **"development sentences"** since they develop or expand the main content of the paragraph. Each of the sentences in a paragraph should help to develop the topic sentence, and each of the sentences should lead smoothly into the next one.

Activity 6 - A topic sentence

Try to write a suitable topic sentence to introduce the paragraph below. The support sentences give you all the clues you need to sum up the topic of the paragraph. Try not to spend more than five minutes on this activity.

Perhaps the most important single issue is the dedication of the teaching staff. Then parents look at the condition of the buildings, the state of the grounds and the provision of resources. Last but not least parents want to know the size of the classes to make sure that their children will receive individual attention.

_____
_____
_____
_____
_____

Once again there is no right or wrong answer, but you will find two suggestions on page 99 in the feedback and answer section.

Feedback not given immediately after the activity: activity on page 31, feedback given on page 99.

Too many words used for instruction

(d) Concluding sentences

At this point it is worth mentioning **"concluding sentences".** Often, but not always, a paragraph may need a conclusion, and therefore one or more concluding sentences. These indicate that you have made a particular point, or reached a particular stage in a story. Then a new paragraph is begun, with its own **topic sentence, support sentences,** and **concluding sentence** or sentences. Activities 7 and 8 will help you with these types of sentences.

Varied fonts (Times New Roman)

Activity 7 - Paragraph analysis

Read the following paragraph and then answer the questions that follow.
You should not spend more than ten minutes on this activity.

Rope has been used for thousands of years. Early man made rope by twisting together pieces of strong fibre such as cotton or jute. Wire rope is made twisting steel wire and is useful when great strength is needed. In recent years, nylon rope has been very successful because it is light, very strong and does not shrink when wet. Rope is an old but still useful invention.

1. Which is the topic sentence?
_____

Why is it the topic sentence?
_____

Which sentence is the concluding sentence?
_____

_____

Varied fonts, which can cause diffluency (Helvetica)

Readability (fog index) – Readability refers to the ease with which one can read and understand written text. The language used in the materials evaluated is British English. The materials are arranged in paragraphs. To establish density of text, I used the Gunning fog index which showed that the materials were sometimes of a much higher level than for the BGSCE level. The language used has proved to be inconsistent for BGCSE learners. This was shown by a fog index ranging between 10 and 14 for the sampled portions of the units. The index was at some point too low, whilst elsewhere in the same study materials it was much higher than for the BGCSE level especially for a non-native speaker of the English language as shown below for Unit 1.

Sample 1: **Calculated index for Unit 1 which is below 12**

The Gunning Fog index is 9.874

- The number of major punctuation marks, eg. [.], was   20
- The number of words was   301
- The number of 3+ syllable words, highlighted in blue, was   29

You can edit the numbers above and recalculate

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Edited Text

These are easily available, cheap publications[.] I'm sure you are familiar with most of them[.] There are, of course, many others[.] Perhaps you enjoy magazines which are written for your particular age group, or which deal with your interests or hobbies[.] At times you buy a newspaper or magazine because the front-page headline or the picture that accompanies it has attracted you[.] At other times you might want information about something that has happened, or you're looking for a job, or you simply want to be entertained[.] When you open a newspaper you look for articles, which you want to read because you're interested in their content[.] Headlines help you to look for articles that will interest you[.] This activity is called browsing[.] [.] You then begin skimming through the pages searching for articles that catch your attention[.] When a headline catches your eye you begin scanning the text of the article and if it appears to be what you're looking for, then you read it carefully[.] Browse - Skim - Search – Scan All these four words are very close in meaning when we're talking about reading a text[.] If you find this confusing, don't worry[.] I'll explain every activity in detail as we progress with our lessons[.] For instance, if you're a football fan you'll have browsed through the various available newspapers, and when you've bought one you'll skim through the paper to search for the Sports section[.] This is usually at the back pages of most newspapers[.] When you have found the Sports pages you'll scan each page for headlines, which deal with your favourite football team[.] Then you'll either scan the article itself or read it carefully for details[.] This scanning process is a very important skill that we use each and every day to save ourselves time[.]

Sample 2: Calculated index for Unit 1 which is above 12

The Gunning Fog index is 14.22

- The number of major punctuation marks, eg. [.], was 10
- The number of words was 218
- The number of 3+ syllable words, highlighted in blue, was 30

You can edit the numbers above and recalculate

Edited Text

Figures of speech and the use of your imagination can help you to write effectively and creatively, and therefore, to arouse interest in the reader[.] But you must be clear and to the point in your essay writing[.] You must be able to communicate through the language you use[.] How do you use language to write creatively[?] Well, dear Learner, the language you use depends on the audience (the people you are writing for) or on the purpose of your piece of writing[.] You should be able to identify suitable language to fulfil a particular function or purpose and you must note the difference between formal and informal language[.] The way we speak is different from the way we write[.] That is why we have what is called Standard English which, when written, can be understood by any user of the language[.] To write correctly in Standard English, remember the following suggestions that will help you in the early stages of this course[:] • write in simple language, and in short uncomplicated sentences • avoid writing down words you don't fully understand — if you're unsure of a meaning, use your dictionary • try not to translate directly from your first language • if you're about to write something, say it in English before you write it down[.]

A fog index of 12 translates to the number of years of schooling represented by a reading level of a high school learner. As such, the fog index for the BGCSE English should be 12 and not

beyond, especially for learners who are second, third or even fourth language speakers of the language. One learner observed that materials were very easy hence not very helpful. He shared that *"They are very easy to understand and that makes us to search for other materials like textbooks because all of them are easy. There are no challenging questions."* The views of learners actually negated the calculations of the Gunning fog index which showed that the materials were not consistent with BGCSE level. This is corroborated by the fact that 106 learners (60.2%) learners mentioned that for them to understand content better they always had to read more books, get private tutors to help them, or even visit the libraries. A fog index of 10 is appropriate for learners who have been at school for ten years, while that of fourteen is suitable for learners who would have been at school for fourteen years, which is beyond the level of BGCSE.

Glossary to explain difficult words – There was no glossary provided of difficult or new words. Instead, learners were encouraged to find out meanings of the new words. The problem was that after their attempt, learners were not able to confirm whether their answers were right or wrong as no feedback on the new words was given. Technical terms were not explained. One learner shared that some words were difficult to understand, and I also observed this during document analysis. Most new concepts and terms were, however, typed in bold. Concepts were not explained using relevant examples.

Verbosity – This refers to unnecessary use of words. The study materials used long, winding sentences throughout the course. This was despite material developers believing that they used simple language in the design and development of the materials. All five material developers explained that they simplified concepts in the development of the content. The five respondents all agreed that they wrote in a simplified and easy-to-understand language. This was also confirmed by learners, the majority of whom stressed that the content of their materials was written in an easy-to-understand language. Some learners argued that the materials were difficult to understand while other learners thought not. Others shared that the materials were easy to read, with one explaining that the problem was that English is *"cheap to speak but hard to write."* Tirelo from GSS stated that *"The modules are not difficult and are easy to understand."* This view was shared by Jaba in Matsha, who reiterated that *"A ... di motlhofo madam,"* meaning that the language is very easy. The tutors, however, disagreed with the learners on whether the vocabulary in the materials was easy for learners to access the content, and whether

learners' English language proficiency (reading, written and oral) had been taken into account by material developers. The tutors' responses are summarised in the figure that follows.
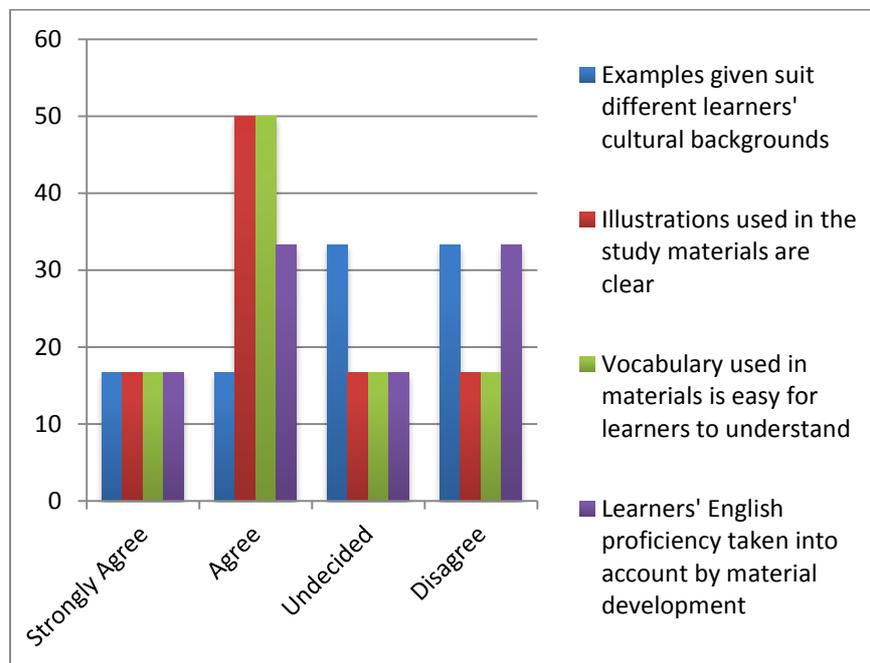
Figure 8: Material features

A significant number of tutors were either undecided or disagreed on whether material developers considered suitability of examples used, clarity of illustrations, level of vocabulary and learners' English language proficiency when developing the study materials.

Low frequency words - There was no evidence of low frequency words used in the materials, and this might be the reason why learners claim that the material is easy yet they could not understand. Low frequency words help learners recognise tasks much more easily (Diana & Reder, 2006). Learners who have been in school for 12 years would thus need words that can facilitate easier understanding of the content. Low frequency words are key to writing **simple sentences.** However, because the materials used convoluted sentences, failed to communicate adequately with learners.

Use of signposting in the study materials – Signposting can help make text clearer to the reader, as well as show how the content is structured. This is like labelling your content for the user to easily understand. The study materials had no signposting that could help the learner appreciate the ensuing content. Signposting would allow the learner to appreciate the structure of

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the content. The signposts would also provide information on topics to be covered, their order and even the issues to be discussed. Signposting was absent in all the study materials except at the start of a lesson where a paragraph introduced the subject matter very briefly. Points of emphasis in the study materials, however, were clearly marked as they were mostly in bold type.

I have been discussing how language can make learning accessible in ODL. For learning to take place learners need to understand the content, and this is discussed in the next section.

4.3.3   Content: palatability

Content palatability was mainly concerned with satisfaction resulting in conformity to approved standards. This part of the document analysis aimed at establishing if the content of the study materials was at the right level for the programme, neither too difficult nor too easy, whether there was enough content for learners, whether new concepts and terms were clearly indicated and whether they were explained using relevant examples. It also sought to establish if concepts and examples were linked to learners' existing knowledge. The various aspects evaluated under content palatability are discussed below.

Content alignment with national curriculum – The study material is not fully aligned to the curriculum as not all objectives are addressed. The course weakly relates to syllabus requirements and does not fully address the national curriculum objectives. Critical aspects of syllabus objectives had not been covered by the materials. These aspects include listening and speaking, group activities, interpretation of graphic information, report writing, letter writing and composition. This means that there were gaps in the content given to learners. Though the course insufficiently related to syllabus requirements, yet when responding to the questionnaires, material developers stated that they had developed materials as prescribed in the national curriculum. They also indicated that they regularly communicated with BOCODOL staff, who assured them that they were doing the right thing when developing the materials. The issue of incomplete content came up again during interviews. Participants such as Lesedi were of the view that the modules were difficult to understand as *"it was short, brief ... some topics were not covered."* This was something I also noticed when evaluating the materials, that there was incomplete syllabus coverage, resulting in insufficient content. Lesedi continued that *"Modules were easy to read but difficult to understand because they were short."* Materials had proved to be shallow and not challenging to learners. One learner shared that *"Those study materials are not deep. They are not going deep and they are not developing you that eager to go ahead."* The

content was not completely accurate as the course had left out a substantial amount of the syllabus. This had implications regarding assessment as it only addressed that which was covered by the content and had potential to greatly compromise the examination requirements. Aspects such as listening and speaking had been left out completely, as well as group activities which were supposed to keep learners active to help reduce their feelings of isolation. The course content left out the interpretation of graphic information as well as writing skills.

Comprehensible – Some learners have shared that the materials were easy to read through but difficult to understand. This was probably because the teaching objectives were not easy to understand. In terms of difficulty, only one tutor explained that the content was too easy for learners while five said it was not. This was in line with the Gunning fog index (GFI) which had an index calculated beyond 12 as indicated in section 4.3.2. This means that the content was developed for learners who have been schooling for more than 12 years. However, there were differing views on whether the content was at the right level for the BGCSE programme. Tutors agreed that the study material was simplified so that it catered for all learners. One learner, however, expressed that she had to read materials repeatedly to understand the content. Learners shared that the materials were not effective as they did not have tests and there were no extra exercises to facilitate understanding of the content. One learner said that she had to repeatedly do assignments and activities in order to understand.

Recency and relevance of content– The materials were developed in 2001 and are still in use in 2015, 14 years since they were first designed and developed. Much of the content, especially the examples, are no longer relevant. The current modules use some terminologies and make references to phenomena and issues with which learners from very remote areas may not be familiar. Unit 3, for instance, makes reference to foreign magazines such as Pace and True Love. The writers could have instead used local magazines such as Lapologa and Kutlwano. Unit 6, deals with sports and leisure, made reference to the FA Cup and Manchester United. These are foreign sporting entities that many BOCODOL learners in rural areas may never have heard of. Basing an assignment on these examples, therefore, excluded some learners from understanding the learning activity. It would be best to contextualise the examples as much as possible. There was consensus relating to whether the content could help learners pass examinations. All six tutors agreed that the content helped learners pass examinations as they could understand the content and 80% also agreed that the covered content, though inadequate, was relevant to the national curriculum. There was no proof during evaluation of study materials that materials alone

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could actually help learners pass their examination. For their part, learners had mixed responses but over 39% believed that materials did not adequately prepare them for examinations while 22% were undecided as shown figure 9. This, again, brings the effectiveness of the study materials in preparing learners for examinations in question.
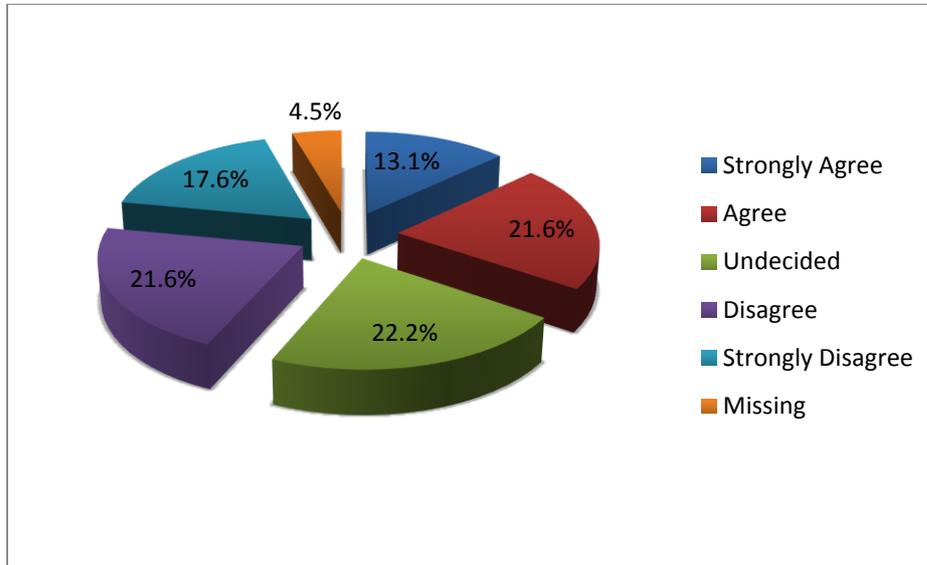

Figure 9: Materials help me prepare for exams

Much of the content in the study materials had no link with the title, which was supposed to be the theme. Thus, it could not help learners pass their examinations. The figure below summarises learners' views about the tutorials and the content of study materials.
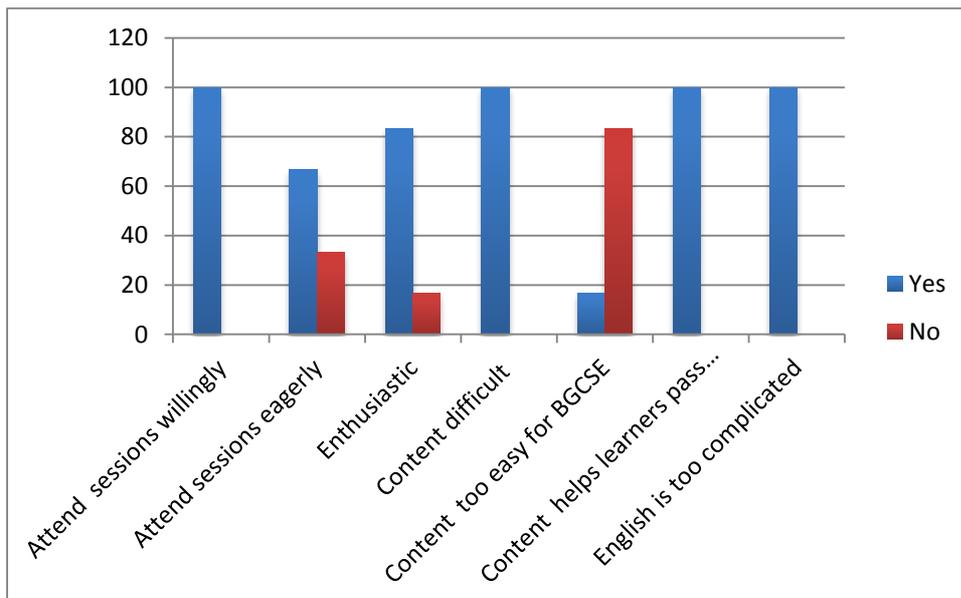
Figure 10: Learners' views

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Use of illustrations - This criterion sought to establish if illustrations were used during the design and development of study materials, and whether the illustrations complemented the text. The criterion also sought to establish if the illustrations were of a good quality, whether they were both culture and gender sensitive and finally whether they encouraged learner motivation.

In ODL, it is imperative to use illustrations to complement text. Continuous text can be monotonous and boring. Illustrations can be used to both complement text and to enhance understanding of content. In the materials I evaluated, illustrations had not been fully utilised. Three of the five material developers asserted that they used illustrations when developing the study materials to further explain difficult concepts. On whether they used illustrations to explain difficult content, four said they did while only one answered that, he or she had not used any illustrations. However, the document analysis exercise showed a mismatch of what material developers said they did during the design and development of the study materials. The evaluation indicated that material developers largely used text. The few illustrations they included were not adequate as content was mainly text which neither encouraged nor maximised learner motivation. The material developers did not effectively use illustrations when developing the materials even though this is highly recommended when developing distance learning content. Regarding clarity of illustrations, four material developers agreed that illustrations used were clear while one was undecided. They all considered the illustrations they used relevant to the text. Out of the seventeen illustrations that were used in all the study Units, only four were photographs while thirteen were hand drawn pictures and not very clear. However, the few illustrations that were used did complement content. Four out of the six tutor respondents said that the illustrations used in the study materials were relevant to the content and that they enhanced learning.

Some units had not used even a single illustration, just continuous text, such as Units 7, 8 and 11. Others, such as Units 1, 2, 3, 6, 10 and 12 had only one illustration each. Units 4 and 5 had two illustrations each. With this background, one can safely argue that of the 12 BGCSE English study units, 10 have used between 0 and 2 illustrations. This showed that illustrations were not effectively used to support learning nor to complement text. However, the illustrations could not encourage learner motivation as they were hand drawn and therefore, not very clear. Therefore, they provided no sense of learner motivation. Learners wished to see illustrations that reflected objects' real colours. For instance, Kgosi observed that *"Nna I would like to see colourful pictures, clouds should not be black and white"* (referring to the sky). They also emphasised that

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they would wish to see illustrations or graphics they could easily relate with. Most of the illustrations used were therefore, redundant and presented no other information that text did not provide.

Content load – In this section, I wanted to establish if there was too much or too little content covered. The aim was to establish the difficulty level of the study materials that were evaluated. To establish sufficiency of content covered and its difficulty level I evaluated both the BGCSE English syllabus and the study Units. The syllabus was used as a source to check if objectives were met. The findings from the document analysis exercise established that content was not overloaded for the BGCSE level. The content in the study materials was presented in lessons, which were further divided into topics. The topics were then divided into paragraphs. This made the study materials manageable to work through. However, many syllabus objectives had not been covered. During the data collection phase of my study, there were mixed views on whether BOCODOL study materials were difficult or not.

Since the two theories of instructional design discussed in Chapter 2 were not used to guide the material development process, there was very little of effective learning taking place. The fact that learners did not understand content that they perceived as too easy was proof enough that cognitive load was too high. If cognitive load is too high then other teaching aids and learning guides need to be used to reduce it for learning to take place. These teaching aids include using of illustrations, cuing or chunking information as discussed in Chapter 2. It might also be possible that since the few illustrations that were used were poorly designed, they may have posed as obstacles to learning, as DeLeeuw and Mayer (2008) contend, poor illustrations may hinder effective learning. Thato from GSS was of a different view: that the content was difficult. She explained that they needed textbooks but did not have money to buy them. A participant in Matsha shared that materials were not easy to understand as they had many mistakes. The participant, however, upon further probing, stated that English language study materials did not have a lot of mistakes but instead, Mathematics did. Others commented that it was easy to interact with the content as they were provided with audio-tapes and could also listen to the radio. Others shared as follows about the content of their study materials**:**

"What I can say, they are marvelous."

"Like if we can take English is an easy language but when it comes to BOCODOL, they will make it simple for you to understand."

"It was quite easy … easy to read and understand it easily."

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Seele, a participant from GSS provided more details. She explained that the content was not difficult as topics followed each other well.

Though the majority of learners who participated in the study believed that the content helped them prepare for the examinations, others explained that the content was not adequate to see them through the examination alone. Patrick advised that *"you shouldn't rely only on the materials that have been prepared for you ... visit libraries ... visit even your previous teacher ... we can google ..."* The same views were shared by Xuma and Seele. Lesedi, however, was of the view that BOCODOL materials could not help prepare one for exams as they do not cover all the topics. She shared as follows: *"Like I said, some contents are not covered."* This was further confirmed by the document analysis exercise.

Seriti shared that she did well because she was using other books as the study materials were inadequate to use alone. The materials did not cover all the necessary content. She argued that the content in the study materials was too easy yet the examination was difficult. As such the assessment did not reflect the true level of the national assessment.

Time allocation - In distance education, it is important to always allocate time to different tasks. This is an important pedagogical support tool which would help guide learners on how much time they need to spend on a particular task or section of work. Different learning tasks need different times to complete. Time slots would therefore, help learners plan and manage their study time more efficiently. The ODL study materials used by BOCODOL learners needed to have time allocated to the different tasks. Only some self-assessment activities had been given estimated time allocations, for instance, *"this activity should not take you more than twenty-five minutes to complete". "This activity will take you about 45 minutes"* (Unit 4 page 12). *"You should not take more than 1 hour to complete this activity".* Some self-assessment activities were not even timed, for instance all Unit 12 self-assessment activities, and Unit 6 activity on page 11. Nothing is provided to help them with especially the studying of the content. Regarding interaction time, tutors agreed with learners that *"time allocated for lessons is not enough especially when they do things like group work."* There was no time indicated as to how long a learner would need to do and complete a given task or part of the content, except on self-assessment activities.

Errors in modules - This was another very common challenge. Learners complained of numerous errors that included typos and answers that do not match the questions in their modules though reference was made to Mathematics content. For English, during material evaluation, I noted that Unit 1 referred to Miss Universe 1999, who was also Miss Universe Botswana, as Miss Botswana. This is incorrect information that keeps recurring and most learners do not know that it is not factually correct. The study materials also had some typographic errors.

Coverage of the syllabus by study materials - The study materials had left out syllabus topics such as listening and speaking, group activities, interpretation of graphic information, letter writing, report writing and composition. This means that the syllabus was inadequately covered. Listening and speaking are some of the skills considered important in language learning to acquire language proficiency. They were also some of the key components to be learnt in the BGCSE English syllabus. For one to master the language, one has to listen to speakers of the language speak in order to acquire language proficiency. However, very few listening exercises had been provided in this course as some of the audio-tapes that were to be issued with the study materials were not recorded. As for speaking, there was no proof, whatsoever, that learners had been assisted to develop this skill. This was because there was nowhere in the materials where reference was made to developing speaking skills of learners. Interpretation skills were also supposed to have been imparted through the BGCSE English course. This skill would encourage a learner to look at a graphic representation such as a map, and then interpret certain information from it. None of the 12 English study units evaluated has considered this skill, yet it was a syllabus requirement. English learners have to be able to write creative work and compositions in English. The materials had not given learners enough opportunity to express their creativity by writing compositions.

Content was supposed to be thematic and this did not materialise as content mostly dealt with issues other than the title, which set the theme. The Unit 1 theme was "Entertainment", yet only the first lesson adequately addressed "Entertainment". All the other lessons were not at all related to "Entertainment". Activity 2 on page 48 made reference to Kutlo and Activity 3 on page 49 made reference to Auntie Emily, but the two were not at all connected to "Entertainment" or the "Entertainment" industry. Page 53 made reference to "My favourite room" which again was not connected in any way to "Entertainment."

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Is content linked to learners' existing knowledge? – The study materials assumed that all learners could relate to the examples used, most of which related to urban activities and events. For this aspect, all the material developers indicated that examples given were relevant. However, learners complained that examples used were outdated and not relevant to them. All six tutors shared that they related new ideas to learners' experiences during tutorials. They felt that examples did not cater for learners' diverse cultural backgrounds. There was no evidence that concepts and examples were linked to learners' existing knowledge as there was no proof of reflections on what learners already knew. There was no activity that engaged learners on their expectations of the course, or what they knew that could help them in their study of the course. This meant that the new content failed to build on what learners already knew. There was a need for an interactive exercise at the start of each unit that would engage learners regarding what they already knew. Learners would value the information if it were linked to something they already knew. Learners learn best using past experience or something to which they could easily relate. The study materials under review made reference to things that were learners were not familiar with, yet the material developers had mentioned that they related new ideas to learners' own experiences, and that they engaged learners by giving activities within the text.

Relevant examples for diverse learners' contexts, ie, multi-cultural and gender sensitive – Two tutors were of the view that BOCODOL materials did not consider learners' different learning styles. There was no proof in materials that teaching strategies incorporated diversity. The materials were developed for a homogeneous group of learners, which led the same life style, with many things in common and coming from similar background. The assumption made when materials were developed was that Batswana have a common culture, yet in reality they have very diverse cultural backgrounds. The material developers suggested that the materials should be developed in such a way that *"they must cater for children and people from rural areas."* During document analysis it was clear that most examples did not cater for learners from remote and rural areas. The evaluated materials proved to be gender sensitive as I did not see any one sex promoted over the other, and there was no evidence of gender stereotyping. The majority of examples used in the study materials did not cater for learners' diverse contexts. During material evaluation, I observed that the examples used assumed that the study materials were designed and developed for a homogeneous group of learners. They used many foreign examples such as football teams and even famous people. They wanted learners to write essays about their favourite rooms, or extravagant weddings they had attended. These titles, by their very nature, excluded learners from remote and marginalised communities. The Unit 1 activity

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on page 31 wanted learners to go into a shop that sold magazines and newspapers. These do not exist in remote and rural areas. Below are annotated examples from Unit 1 word version, page 61.

An activity that that assumes homogeneity of the learners

Write about:

- A busy market place
- The town or village at night
- A bus station early in the morning
- A sports stadium

Amenities that do not exist in rural areas are made part of activities, which remote learners cannot associate with.

Write about:

- A dangerous journey by motor-bike
- An extravagant wedding
- A quarrel with your girl-friend/boy-friend
- A dawn procession
- An exciting event at midnight
- A fatal accident

This is proof that the examples did not cater for the diverse learners enrolled with BOCODOL. This also assumed that learners knew and understood things the same way; the content did not distinguish between the different learners. One learner in GSS noted that *"Ke gore o hithela gore di article tsa teng e le tsa bo Glody Dube le bo Mpule Kwelagobe."* (You will find books having articles about Glody Dube and Mpule Kwelagobe). *"They have long been used. Ke tsa bogologolo."* (Those are very old and talk of old people). It is evident that learners did not connect with the material in terms of relevance of examples being used to further explain concepts. Materials used places that learners from remote and marginalised areas were not familiar with. Unit 3 on "Famous People" has only used Mpule Kwelagobe who was a beauty queen. The module entirely left out other equally "Famous People" who came from other parts of

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the country. One such person was Dada, an internationally known Mosarwa artist whose artwork had been used on the tail of British Airways aircraft. Her famous artwork was featured in most of the British newspapers and even locally. There were folklore singers, poets and other famous people who could have been mentioned alongside Mpule Kwelagobe.

Activity 3.0 of Unit 2 wanted the learners to use their childhood photographs to compare their looks as children with their current appearance. Many learners in rural areas would possibly have no photographs, let alone of when they were very young. This activity, therefore, disadvantaged learners who may not have had the resources needed for the activity. Unit 3 referred learners to magazines such as Pace and True love, as well as novels by Danielle Steele. It would have been proper to use books authored by locals possibly known by most learners, as well as local magazines such as Kutlwano and Lapologa. Unit 4 referred learners to a library and a travel agency. This assumed that all learners stayed in places with libraries and travel agencies, which is not true for most rural parts of our country where learners stay. Content and examples have, therefore, failed to address the diversity of the learners.

Does content encourage collaborative work – Study materials do not lend themselves to collaborative work. Instead, they encourage individual work. The given assignments also encourage individual learning.

Is a reference list provided for further reading – The reference list is normally provided in ODL study materials to provide more reading resources to learners to encourage extensive reading. This is important as learners are expected to read beyond their modules. The reference list would provide learners with an opportunity to explore what other related works have to say about the topic they were studying. The list was not included in the study materials. The reference list is closely related to other resources that had to be provided to facilitate effective learning. The college had provided cassette players at study centres so that learners who could not afford them could go and listen to audios at the study centres. Though the materials had not provided book titles for further reading, they provided a list of other resources that learners would need to successfully study their materials. These include scribblers, dictionaries, pens and time. However, some resources, such as time, have been mentioned but learners are not advised on how they can best use them.

Provision of textbooks - Learners were unanimous in advocating for BOCODOL to provide them with textbooks and reference books, especially as study units were developed many years

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before, in 2001 to be precise, and information needed to be updated, as observed by Janet and Sean. As for Seele, she just wished that more information could be provided, and errors in the modules should be corrected.

For mastery of content to take place, learners should be actively involved with their studies. They need to interact with both their materials and the human resources available as discussed in Chapter 2. In the next section I discuss the interactivity of the study materials. This interaction will include a number of factors such as immediacy and feedback.

4.3.4 Interaction of study materials

For this part, the document analysis exercise sought to establish if study materials were sufficiently interactive to break learner isolation, whether both self- assessment and tutor marked assessments were provided, whether assessments were varied to maintain learner interest and whether assessment matched the content. This part also sought to establish if feedback was provided immediately in the text as well as if the for both self-assessment and tutor marked assessment helped learners identify their mistakes. Learners indicated and appreciated that some in-text activities had feedback provided, although it is given at the end of the unit in a separate place from the activity. However, at times the feedback did not even match the question. This again, was largely experienced in Mathematics.

The document evaluation exercise proved that materials were not sufficiently interactive to break learner isolation except self-assessment activities (SAAs) and tutor marked activities (TMAs) which engaged the learner. There was a very limited use of activities in the study materials. The course largely uses SAAs and a few TMAs. The TMAs were provided with the material as part of the study package. There was only one TMA per study unit. SAAs were simple low order thinking questions and did not resemble the examination. The same applied to TMAs. This compromised quality as learners are hardly prepared for the examination. This means that constructive alignment was not clear in the materials as questions did not relate directly to course objectives. The assessment items were not varied to maintain learner interest. They were uniform in character and did not use learners' personal knowledge. Feedback to SAAs was provided in the study units though at a different place from the activity. For instance, for Unit 1, self-assessment activities on pages 4 and 5 have their feedback given on page 98. In the same Unit 1, a self-assessment activity on page 55 had its feedback provided on page 105. Unit 2 had feedback for an activity on page 12 provided on page 65. An activity on page 4 of Unit 3 had its

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feedback on page 64. Other activities do not even have feedback provided, such as the self-assessment activity on page 27 of Unit 3. The TMAs were sent for marking and the details of their feedback are provided in section 4.3.6 of this chapter.

In addition to doing the self-assessment activities and tutor marked assignments, Xuma added that the materials engaged them as they had audio-tapes. *"... Listen to it and learn how to greet people and exchanging in conversation between two people."* Xuma again mentioned that audios helped especially when they studied alone. Aspects of student support are missing altogether from the study materials. There is no part of the materials where effective student support is indicated. Learners across all research sites wanted BOCODOL to start using more interactive strategies to facilitate teaching and learning. One learner in GSS suggested that videos should be introduced to complement modules, as well as monthly tests. SAAs were the main means of interaction with learners. Materials were largely print, with very minimal use of audio infused.

Other challenges that learners shared include the fact that they were not given any extra exercises or work to help them prepare for examinations. Shaun in Matsha shared that he experienced isolation as he studied alone. He shared that he did not understand *"because there is no one who can help."* Letang concurred and further explained that most of the time he studied alone, but when he went to the study centre tutors did not turn up. Kala shared the same sentiments and posits that *"when you do not understand the question, that's when you find it difficult and there is nobody to help you."*

During my study, learners shared their displeasure concerning tutors who did not come for tutorials, or if they ever came, they expected learners to initiate the interaction by sharing their problems. *"They do not teach yet they know that modules only cover a little content,"* argued one learner. Through the interview interactions, one could easily hear the frustration learners had as a result of studying through ODL. To them, for learning to occur, human intervention had to be there to unpack the content for them. They believed tutors needed to be present to teach, for them to really learn something. Learners expressed feelings of isolation due to lack of support created by the tutors who rarely attend tutorial sessions and even yearned for the relationships they had with their teachers at conventional schools. One shared their wish as follows: *"you know ... our wish, tutors can ignite or spark questions from people by just developing that friendship talk into them, creating that bond which we used to have from our previous schools."*

To reduce feelings of isolation, learners expressed that they wished they could be given **more contact hours**. Learners wanted contact times increased to be able to interact more with materials. They argued that BOCODOL should *"find a way we can attend some hours, only two hours or one hour regarding a lesson like Mathematics is not enough,"* suggested Patrick. This view was shared by one tutor who observed that *"Given an opportunity, I would suggest for more hours, teaching and tutorial done interchangeably because 1 hour tutoring is not enough. If pupils failed to do well in a classroom setting what more of distance learning. They need to be taught."* This suggested that tutors, just like learners, needed to be taken through ODL and what is entailed when studying through the mode. The statements show that BOCODOL does not adequately orientate learners on how to study as an ODL learner.

Immediacy was another aspect I looked into when evaluating the study materials. Immediacy means aspects that could make study materials attractive to the learner as well as user friendly. Immediacy has to do with the qualities that can immediately make a book interesting, thus making one feel like using it immediately. These qualities should elicit learner satisfaction and learning. Learners should immediately become attached to the study materials when they interact with them. The materials should bring humour to the learners' learning and learners need to relate to the examples used. These are some of the factors that Knowlton (2000) consider critical and immediate to enhance learning.

The study materials had no author profile provided. An author profile would help learners to easily connect with the author and appreciate that their materials had been developed by people who were authorities in the subject. The content list was provided as well as objectives for each study unit. This helped learners to appreciate what they would be studying about in a particular part of the study unit. The content is presented in manageable chunks. The modules were divided into lessons. The lessons were then presented in topics, which were further divided into sub-topics. There was some evidence of the use of the first person, directly addressing learners as if they were in a classroom. This helps motivate the learners as they can "hear" the tutor's voice within their text. However, there was no evidence of using the active voice. There was also no variation of tone in the materials. The material evaluation exercise established the isolation that learners referred to during interviews. Materials do not engage learners and this ended up frustrating them. The "tutor's voice" that should be heard in the materials was conspicuously absent from ODL materials used by learners.

Learning materials were generally viewed as not being immediate by learners. The unfriendly nature of the study materials is revealed in the following discussion of various aspects that were considered. However, material developers encouraged BOCODOL to *"develop a special curriculum that will encourage development of more interactive content, for instance on-line."* They also requested that they should be thoroughly trained after being engaged so that they could write effective materials.

4.3.5 Strategies for learner centred approach

This criterion for document evaluation investigated strategies that facilitated **learner-centred delivery**. This sought to establish whether ODL study materials under review took into account **ICT integration** to enhance learning, and whether the ICT advances used were relevant to the text. The criterion looked at whether the study materials were learner-centred to encourage both **independent learning** and **collaborative learning**, as well as whether the teaching strategies used **incorporated diversity.**

Integration of ICT into the study materials – ICT had not previously been used in this course, yet the expectation was to use integrated media to enhance the delivery and learners' understanding of the content. There was inadequate use of audio-visuals though some learners appreciated the efforts to use audios. Lesedi shared that cassettes were also provided to complement the print modules. As much as there was some minimal use of audio-tapes, learners wanted BOCODOL to provide varied teaching strategies. Patrick shared that *"they have to provide us with some video tapes ..."* Some tutors also suggested that there should be *"use of more visual and audio aids to enhance learning especially on mature students."*

In ODL, learners are encouraged to create learning groups so that they can experience collaborative learning. This group learning would help break isolation. BOCODOL materials did not encourage group activities yet this was one of the skills that the syllabus encouraged. All the activities in the BGCSE English study materials promoted individual learning as opposed to group learning. These activities were self-assessment activities and tutor marked activities and none of them encouraged learners to work as a group. Learners were asked which interventions they used for studying to facilitate more comprehension of content and the majority of them, 161, confirmed using face-to-face sessions. Otherwise, most of them never used the resources such as audio-tapes, telephone tutorials, email and video-tapes to get the necessary academic support.

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Material developers were asked if they had incorporated audios in the study materials they developed to explain difficult concepts. One had said they incorporated the audios two said they did not, while two did not respond to the question. When doing document evaluation, I confirmed that only a few modules integrated audio use. The audios were incorporated in seven study modules, namely Units 1, 3, 4, 5, 6, 10 and 12. Units 2, 7, 8, 9 and 11 did not integrate audio at all. However, in terms of embracing learners' different learning styles, only one tutor agreed that materials considered learners' different learning styles while three were undecided.

4.3.6 Assessment

Under this criterion, I considered whether the assessment was aligned to content and whether the assessment was sufficiently varied and comprehensive to test the learners' different levels of understanding. I evaluated learners' marked scripts to establish the quality of assessment items and the type of feedback tutors give to learners.

Alignment with national assessment strategies – For this criterion I used the BGCSE assessment syllabus. I then established that assessment was set below the national examination level, for which the materials are developed. Assessment given to learners was not challenging yet they scored very low.

Provision of self-assessment and tutor marked activities – The only form of assessment given to learners were self-assessment activities (SAAs) and the tutor marked activities (TMAs). SAAs were written at various points during the course. However, TMAs were given as part of the study material package and submitted for marking when the learner had completed the entire unit.

All the material developers confirmed that they engaged learners by giving them activities within the text, as well as providing them with written feedback. Tutors had mentioned that they provided learners with comprehensive feedback for them to appreciate where they had gone wrong. Most of the learners had also cited in-text activities and tutor marked assignments as the key means through which materials engaged them, and facilitated their learning. Eighty-three learners out of the 176 corroborated the material developers' view that indeed in-text activities in their materials helped them understand the content better. Sixty-three learners were undecided while the remaining 30 learners did not agree that in-text activities were helpful as shown below:

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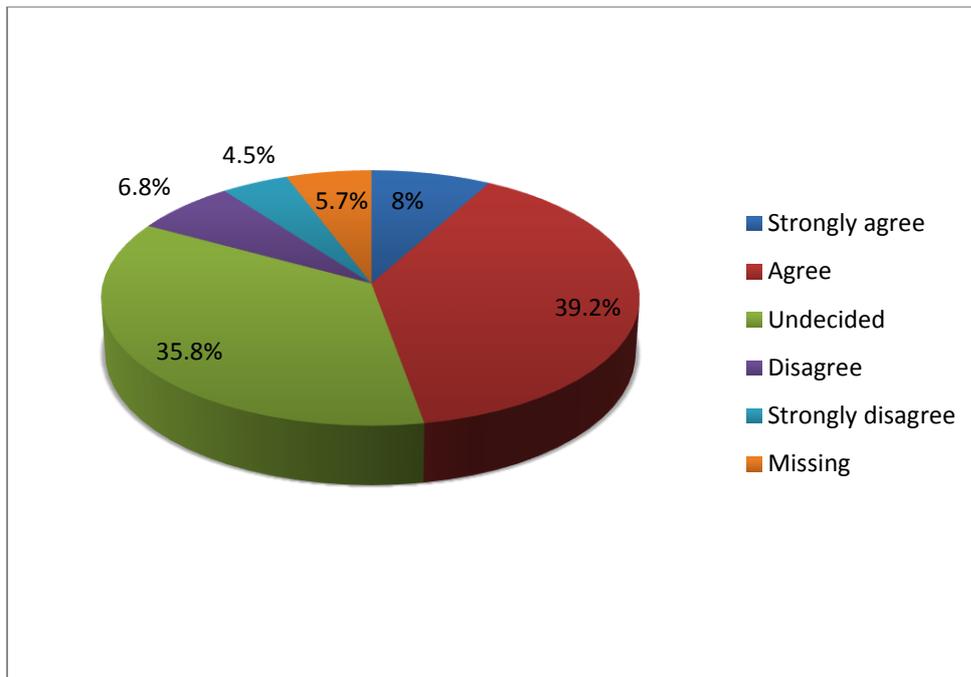
Figure 11: Helpful in-text activities

Since most of the learners enrolled with BOCODOL had sat for examinations in the past, they argued that the BOCODOL assessment did not match the national examination standard. This is probably the reason why 35.8 % was undecided and just over 11% disagreed that in-text activities were helpful. They probably based on their past experience.

Regarding the tutor marked assignments, 88 learners felt that the assignments helped them understand the module content better. Sixty-one learners were undecided while the remaining 27 thought the assignments were not helpful, as summarised in the figure below. Again a significant number (34.5%) was undecided for this question. This might have been because the SAAs and TMAs are both brief and could not adequately match the examinations, which learners have already had the opportunity to write before enrolling to study with BOCODOL.
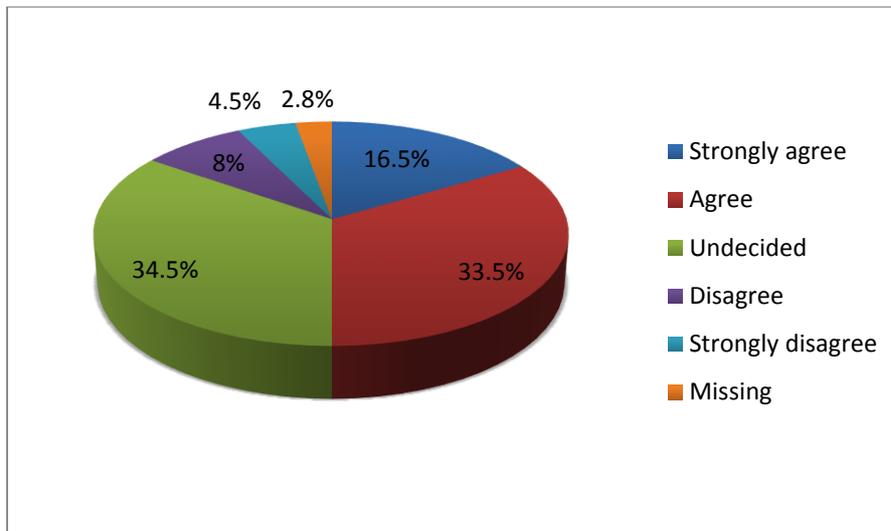
Figure 12: Assignments help me understand

One learner in Matsha was of the view that the modules engaged him through the activities that they had to do, and also provided feedback. He explained that *"... they are tutor by themselves because they will give you an activity to do where else at the end there are some answers."* During the material evaluation exercise, I observed that there were in-text activities and tutor marked assignments that were given to learners. Other learners concurred that the materials engaged them during their studies through in-text activities. Learners shared the same sentiments on the issue of activities with feedback. Lesedi added that *"There are assignments which I also do after reading ..."*. They also did assignments which they later submitted to tutors to be marked. These were TMAs which they had to do at the end of each unit. However, some learners indicated that they had tutor marked assignments missing from their study packs. This meant that they had to photocopy assignments from their peers to do their TMAs.

The evaluation of study materials against the syllabus confirmed that assessment was not aligned to content, and this brought a mismatch between unit assessment and the national examination. Learners also wished that modules should not provide answers to each and every activity as there was too much feedback to activities. Seriti suggested that study units should have more questions and fewer answers to fully engage the learners. This was corroborated by Kgosi, who opined that *"if you are not disciplined you can just copy."* Kgosi observed that *"they have to make us think because when we sit a test ... er ... it is just a paper and me alone. There is no book."* Tirelo, from the GSS Centre, wanted to see more challenging questions as well as timely feedback on assignments. Some learners complained that tutors did not adhere to the assignment turn-around time. The learners were not happy that tutors took long to return their marked assignments due to

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absenteeism – thus delaying their feedback. *"… you write assignment then submit. It is going to take a lot of the time for the tutor to mark and submit to the class so that you can collect your paper and see where you went wrong,"* one learner shared during the interview. Learners further explained that one can reach unit 5 before getting back their feedback for the module 1 assignment from tutors. This delayed feedback of learners' marked assignments, however, is a clear breach of the BOCODOL Learner Charter (2001), which stipulates that tutors will return learners marked assessment scripts with comprehensive feedback for each learner within fourteen (14) days.

Some tutors, just like most of the learners and material developers, believed that monitored or invigilated tests and examinations should be introduced as part of the learners' assessment because most of the time they got help from family members at home when doing their assignments. Therefore, the assignments alone would never adequately prepare them for examinations. One tutor supported tutoring as an ODL teaching strategy by sharing that *"Tutoring can be one of the best teaching methods as learners study on their own and ask for assistance where they fail to understand."*

The next section will provide details of the marked assignment scripts, which I evaluated. This was mainly to establish the amount of learner support tutors provided to learners and how much guidance and counselling was done through the assignment feedback. It was evident that tutors did not help learners identify their mistakes in assignments.

Tutor marked assignments – Written feedback on learners' assignments does not seem to help learners identify their mistakes. For this exercise I developed a matrix, **Appendix 7**, to evaluate the assignment scripts. The sample tutor marked assignments used were for the years 2010 to 2014 inclusive. The assignments spread across learning centres that fell within my identified research sites. My observation, though, was that despite the assignments coming from different tutors and from different learning centres, tutor feedback did not provide comprehensive guidance to the learners.

Provision of comprehensive and timely feedback

Acker and McCain (1993, p.11) had this to say about interaction and feedback: *"… interaction is central to the social expectations of education in the broadest sense and is in itself a primary goal of the larger educational process"* and that *"… feedback between learner and teacher is*

necessary for education to develop and improve.” Duranton and Mason (2012, p.85) explained that *“Accordingly, the discussion board on blackboard was set up as the powerhouse of the programme and the key to both learner-tutor and learner-learner support ... discussion and feedback is firmly channeled through the discussion forums where students correct one another's work and on the tutors' input and feedback.”* White (2013, p.93) added that *“Teachers should be able to provide accurate feedback, encouragement, and support in such a way that the student feels assured, valued and respected.”* Feedback in ODL needs to be prompt to motivate learners. Learners who participated in my study shared that it took a long time to get back their marked assignment scripts. One commented that at times they even sat for examinations without having received their marked assignments and feedback from tutors. In distance education, this could dampen the learners' spirit to learn, leading to unnecessary dropping out of the programme by learners.

For the 14 randomly sampled BGCSE English Language tutor marked assignments, the marks ranged from 8% as the lowest to 77% as the highest. The tutors did not account for either the obtained or lost marks, but instead just made ticks and crosses on learners' scripts and provided no detailed feedback on where the learners went wrong or what they left out that they should have included in their answer. In ODL, feedback is seen as the main way through which a tutor can interact in detail with the learner. For provision of feedback, tutors unanimously affirmed that they explained to learners why they got the assessment wrong and provided counselling as well as the right answers. They also shared that they provided written comments on feedback. During evaluation of marked assignment scripts it become clear that the comments made by tutors as feedback was not very effective. It was also clear that what tutors said they provided as feedback was never done.

Tutor comments given were mostly brief and not very helpful as summarised below.

Table 13: Comments on marked learner assignment

Assignment mark	Comment
38%	"More effort needed in answering comprehension questions."
8%	"A summary is one paragraph. This is a very low mark. Work very hard."
28%	"Answer questions briefly and read and follow instructions. A summary should not be longer than 150 words."
77%	"Keep working very hard. You can perform much better."
47%	"More practice needed on how to answer comprehension questions."
23%	"Your composition was not well written, you don't know the place you wrote about well. Your points are mixed up."

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Tutors did not explain what learners had to do to get better grades next time, and for the assignment awarded 8%, the tutor did not even explain what the *"work very hard"* meant. The comment will as such remain less than helpful to the learner.

One assignment was awarded 23% and the tutor provided only negative feedback without guidance regarding why the learner lost marks. Most tutors only ticked, crossed and underlined when marking without any comments to explain such markings. They provided marks without comments as to what the markings meant and where the grade came from. As for the 47% assignment, the tutor merely provided information that the learner needed more practice, without guiding her or him about how comprehension questions are supposed to be answered. The highest assignment score recorded was 77%, but again the tutor had not commented on where the learner scored the points, nor even accounted for the missing 23%, as should be the case in ODL.

On whether tutors provided learners with feedback that **helped them understand where he/she has gone wrong,** for all the sampled assignments this was not addressed. Despite the majority of learners obtaining very low marks, tutors had not helped them understand where they had gone wrong so that they could avoid repeating the same mistakes the next time. Only a few tried to address this though very briefly and inadequately. No single tutor had, in the sampled assignments, provided feedback that adequately explained where the learner had gone wrong.
The only tutor that attempted to address where the learner had gone wrong had the following comments:
"... pay particular attention in your spellings ..." This was the only feedback given to explain where the learner might have lost marks, yet he/she got only 45%. The feedback did not explain anything more that may have led to the learner scoring 45%. Tutors failed to provide feedback to the learners on exactly where they went wrong.

Since tutors did not adequately explain where learners had gone wrong, they were not able to provide learners with remedial strategies to improve their answers. It is, therefore, possible that learners would repeat the same mistake the next time a similar question is asked, and this might be during an examination. In a classroom, teachers normally thoroughly discuss feedback with learners to ensure that they do not repeat the wrong answers in future. The same approach needs to be extended in ODL. In their response to questionnaires, tutors had mentioned that they provided comprehensive feedback to learners' assignments. However, learners' sampled marked

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assignments proved otherwise. There was a mismatch between what tutors said they did regarding feedback on learners' assignments which lacked details.

In ODL it is common for tutors to provide learners with information regarding their performance, for instance, whether they are doing well or need to work harder to improve their grades, of course with guidance from their tutors. As such, one item addressed was whether the tutor **gave the learner information about her or his own performance**.

Most tutors did not provide learners with information regarding their performance. Tutors are expected to inform learners about their performance, whether they consistently score low marks, whether they have improved and so on. At this level the expectation is for tutors to know their learners and how they generally perform. This would help learners know whether there was any improvement or not in the respective subjects they study.

When tutors provided feedback on learners' assignments, they did not mention nothing about the performance of the learner, whether he or she has improved or scored lower than usual. There is not even feedback about where the effort should be exerted.

There was an item on **constructive, encouraging comments, and motivating the learner to keep trying harder to do better next time**.

The tutors had not really encouraged and motivated learners as shown by their comments in **Table 13**. In ODL, it is very important to motivate learners. The tutor has to always encourage learners and motivate them to believe that they could always do better next time.

For the 77% assignment the tutor wrote the following comments *"Keep working hard. You can perform much better."*

For a 65% assignment, *"You can do well if you study hard ..."*

For a 45% assignment, *"You can do well, but pay particular attention in your spelling ..."*

For a 52% assignment, *"With a bit of direct speech your essay could have been the best piece. Work hard on part B"*

Some tutors wrote negative comments such as the following that could easily discourage learners:

"Work very hard, both parts of the paper are badly done. Read more and understand each question before answering it."

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"Your composition was not well written, you don't know the place you wrote about well. Your points are mixed up."

Another item for document evaluation was to **provide appropriate ways of responding to questions, where applicable, and indicate that which should be included in a good answer**. In other words, tutors should provide model answers to learners as they would do in face-to-face set up. Most tutors did not provide the ideal way of responding to questions so learners could not tell how they had to respond to questions. Instead, they only made ticks for correct responses and crosses for wrong responses. Others underlined learners' responses without even giving any explanation for the underlining.

A few tutors attempted to guide learners on how they could respond to some questions as follows:
"… keep trying and add direct speech and descriptions in your essay."
Tutor comments to learners needed to be detailed for them to be effective, and where possible tutors could provide examples.

Another item was whether tutors **provided coaching and guidance on how to best respond to questions next time**. Coaching learners on how to adequately respond to a question was not done in any of the assignments. This came as a surprise as one would expect tutors to provide guidance on how learners should have responded to questions. One can, therefore, assume that learners would make the same mistakes if they are asked similar question(s) again. Other tutors provided guidance even though not detailed enough, for instance for a 40% assignment where the tutor advised the learner to *"use direct speech here and there in your narrative and learn to punctuate it properly. Improve on your format and describe the setting and characters briefly. Spice up your writing with idioms."* Some examples could have been used here to make the comment more real and effective. Instead of just writing "spice up your writing with idioms," the tutor could provide the learner with one or two idioms he or she could have used.

On whether tutors **provided corrective feedback,** I observed that none of the tutors provided corrective feedback. The expectation was for tutors, where possible, to provide corrective feedback where learners had gone wrong to assist them when doing revision. Tutors are expected to provide corrective feedback by giving examples of the ideal/correct answer. This would help learners appreciate how far or how close they were to the correct answer. However, all the tutors

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for the sampled assignments did not provide this type of feedback. Only two tried to do this but still their feedback was still not very comprehensive. For instance, one wrote that *"You can do well if you study hard. Keep trying and add direct speech and descriptors into your essay."* One wonders here if the tutor assumed that her or his learners knew what descriptors were. It would be necessary to give examples of the descriptors the learner could have used in the context.

Corrective feedback is important as it helps learners know what the correct answer to the question is. This would help during their revision and they would possibly get the answer correct next time the question is asked. Tutors were also expected to **provide mutual feedback**, which would mainly motivate and encourage learners. Mutual feedback provides counselling to learners and this can be summarised as written feedback – for instance, guiding learners where they can get answers to the questions. The tutor can provide learners with reference textbooks for further reading to facilitate better understanding of the content they had not answered correctly. As such mutual feedback, just like corrective feedback is critical in ODL. Even though little was done to address mutual feedback, there were attempts to provide it. For instance, for a 52% assignment, *"With a bit of direct speech your essay would have been the best piece. Work hard on part B."* For a 35% assignment, *"more effort needed to secure higher marks."*
"More practice needed in summary writing. Points follow each other to score better marks. Read each question thoroughly before answering."
The comments provided did not explain whether the learner answered questions the way he/she was expected to or not. The feedback is, as such, lacking in necessary details, and therefore not so helpful to the learner.
"More practice needed on how to answer questions" is highly inadequate feedback for an assignment that scored 47%.
"Answer questions briefly and read and follow instructions. A summary should not be longer than 150 words," these comments are insufficient for an assignment that has been awarded 28%.

Tutors' support
A number of learners decried the fact that tutors provided them with very little support, especially as they hardly availed themselves for tutorials. Tutors negated this and shared that they gave learners all the necessary support. Of the six tutors, five highlighted that they provided learners with answers whenever they failed to answer while only one did not. All six, however, agreed that they allowed learners to interact amongst themselves to come up with correct answers. From the survey, some tutors had mentioned that they did assist learners who had not

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grasped the content during session. This was shown by the four who shared that they supported slower learners by giving them more work to do outside tutorial sessions without demanding any payments. The help that tutors alluded to here was, however, probably not effective as learners still scored very low marks even after the alleged intervention.

4.4 General observations

Following my study, it was evident that there were other critical observations that were not directly related to the design and development of study materials. These were, however, equally important findings, hence, I now discuss them under the general observations.

Suggested changes - During the study, I asked learners to share the changes they wished to see in the materials. Though learners did share what they wished could be changed, most of what they mentioned was not linked to study materials *per se*, but rather on student support. Material developers, learners and tutors all agreed that there was a need to review the ODL study materials used by BOCODOL learners as some information was outdated. They were concerned that BOCODOL took very long to review the materials used by learners. During the study one material developer asked *"How long does it take the institution to review the materials?"* with one even suggesting that there should be a regular review of learners' study materials. Though the materials were considered outdated, some tutors felt that the assignments had *"Good examinations standard questions – to help learners practice for examination."* Tutors further expressed their misgiving over *"Shortage of materials for tutors since we must rely on learners' materials ... and high learners' absenteeism."*

Material developers had mixed responses on the need for Botswana to develop a language policy especially for the education sector. Two participants agreed that there was a need for a policy, two were not sure, while one did not respond to the question.

During the study, some tutors shared that *"Students were not willing to do their work and to participate in tutorials. Some would come and just sit and do their own things."* One shared that some learners lacked commitment towards their studies. One tutor from one of the research sites made the same observation and alluded to *"Lack of commitment by learners which leads to failing the examination the second time."*

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Just as some learners preferred the CCL mode, some tutors still want to teach as they did in conventional schools. This is shown in the figure below.
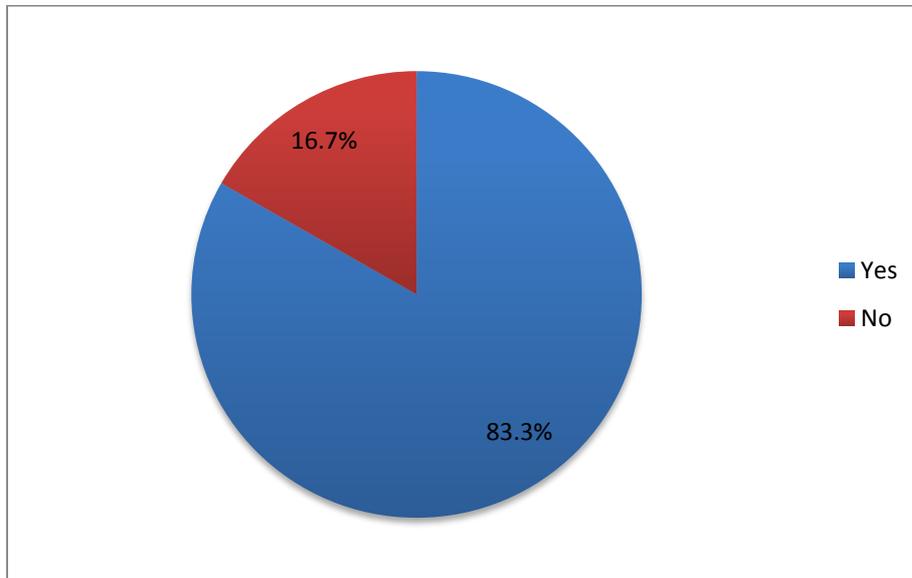
Figure 13: Tutor delivers like in CCL

One tutor observed that *"The students seem to want to be taught as if they are in a conventional classroom, not taking into consideration the constraints of time."* Another tutor observed that learners *"… need to be made aware of what tutoring entails, most still don't understand."* There was, therefore, a need to offer counselling which would help both tutors and learners understand ODL philosophy better. Another tutor expressed a wish regarding changes that he wanted to see, and this related to the very high student-tutor ratios that I also observed during my visits to the study centres. The tutor noted: *"I would deal with the ratio of students to the tutor. The large number in class makes it practically impossible to give individuals attention to address peculiar problems."* Another tutor, together with some of the learners, concurred.

As I discussed the findings of my study, patterns or themes emerged. These have come up as result of merged headings and are summarised in the section that follows.

4.5 Emergent themes

The key themes that emerged from my findings related to inadequacy, insufficiency and imprecision, which compromised access of content by learners. I collapsed and merged the main findings emanating from my study. In the next part of the study, I now summarise the themes

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that emerged as I combined the categories. Below I discuss details of themes emerging from my findings.

4.5.1 Inadequacy/Insufficiency

From the study, it became apparent that a **large part of the syllabus was not covered**. This meant that important aspects of English Language learning such as listening and talking, report writing and creative writing (compositions), were not covered by the study materials. This shows **a gap in the role of the institution** regarding both the material developers, the learners and the tutors. The material developers **did not provide all the content**, and the content they provided was **insufficient**. It **failed to adequately engage learners** and this resulted in **learner isolation**. It would have been helpful to have used the Theory of Instructional Dialogue when designing and developing the materials, as well as the Cognitive Load Theory, which have both been fully discussed in Chapter 2 of this study. The Cognitive Load Theory would have helped in presenting the right content for the BGCSE level, together with using relevant examples. The Theory of Instructional Dialogue would have facilitated the design and development programme by ensuring that the "conversational" aspects of programme development are infused in the study materials. The material developers did not adequately present the content, and this is a quality measure that the institution could have avoided. The institution could have engaged qualified **instructional designers** to drive the material development process. In this way material developers would have been guided and probably produced much better study materials.

Learners, together with material developers and tutors could have also been assisted to understand the **language** better by using what was familiar to them, rather than using many foreign concepts and examples. At the BGCSE level, materials should use examples that learners are familiar with first, for them to understand and master their learning before examples can be drawn from outside their environment. By the time foreign examples are introduced, learners would have possibly embraced the learning more. Most BOCODOL tutors had not taken part in the development of the content they tutor. However, an attempt was made to deliberately develop study materials "with a tutor in print" to facilitate easier understanding of the content by learners. Despite this background, BOCODOL learners continued to express their wish to be taught as opposed to being tutored. This trend, however, seemed synonymous with distance learners worldwide. Xiao (2012a, p.375) in his discussion on one study he carried out in the People's Republic of China, pointed out that *"... students' higher ratings of presentation skills and*

engaging students demonstrate that they might not be fully ready for autonomy and content instead of taking full advantage of the course materials."

Fenouillet and Kaplan (2009, p.1) highlighted that *"The dropout rate of distance learners is much higher in comparison to students in face-to-face settings."* This may be curbed by engaging learners through different learning strategies that can make the programme more exciting to the learners. These different learning strategies need to be incorporated into the study materials. Xiao (2012b) also shared that learners should be offered counseling for them to appreciate and take more responsibility for their studies. At BOCODOL, during orientation, enrolled learners are normally counseled to help them understand and appreciate what distance education is all about. They are also advised concerning the challenges that usually characterise ODL, such as isolation due to limited interaction. However, almost all learners who participated in the study were unhappy about tutors who were frequently absent during face-to-face sessions, or who would only come and wait for learners to ask questions. It became clear that there was a gap in orientation. Learners expected services offered at BOCODOL to be an extension of what was happening at CCL. They did not appreciate that in distance education the learner stands at the centre of her or his learning, while the tutor comes in as a facilitator to guide in the learning process. Learners were not at all ready to study alone yet most of them had been studying with BOCODOL for at least one year. This, therefore, showed that learners were not well prepared to "migrate" from conventional classroom teaching to the open and distance learning mode. They were still holding on to the traits of conventional learning.

Need for sufficient learner and tutor orientation in ODL. Being a distance learner has proved to be very difficult for those who may have opted to study through the distance learning mode. This is a view that Xiao (2012b) shares. Xiao (2012b) acknowledges that studying through the distance mode is a challenge *"due to the unique nature of distance language learning ... isolation, competing commitments, absence of the structure provided by face-to-face classes, and difficulty adjusting to the new context."* These challenges, if not shared with learners at orientation time, can lead to learners dropping out of the programme. Guy (1991, p.163) argues that *"It may be more appropriate to identify the culture(s) of the learners prior to the development of an institutional response so that it is sensitive to those cultural reforms."* This would also guide in the orientation of both learners and tutors.

Over and above this, it was necessary for the institution to have **adequately oriented learners on ODL**. All the learners were people who came from a traditional schooling system who had trust in an ODL institution. The institution could, therefore, have helped them understand that ODL and a traditional learning system were two very different modes of learning. Tutors, who were all from a traditional learning system, also needed to be trained on how best they could guide and support the learners. The tutor comments on learners' assignments were not motivating and could not guide learners. The end result was lack of interaction which resulted in learner isolation. Since the study materials do not encourage interaction and therefore, make learners very docile during their study. There is not much student support as both the self-assessment activities and tutor marked activities encourage individualised learning.

4.5.2 Inefficiency

Incomplete content coverage – Materials used by ODL learners enrolled with BOCODOL have incomplete content. Much content that has to be covered has been left out yet at the end of their study, learners write the same examination as all other students doing the same level as ODL learners, with the assumption that all content has been covered. There was clear inefficiency on the part of the material developers, the tutors and the institution. Material developers were tasked with developing ODL study materials. They did not do a very good job in terms of presenting the content, as well as syllabus coverage. The materials were then **dispatched in incomplete batches**, with some learners having to sit for their examination without having studied some units. The end result was that **learners under-performed** as they were using materials that could not improve their performance in any way. Tutors who were also engaged to support and guide learners **did not sufficiently offer the necessary support**. The institution could have noticed this and remedied it had there been a robust monitoring system in place.

4.5.3 Imprecision

When learners enrolled with BOCODOL, they had hope and confidence that they would improve their results. They had hope that they would get materials that would be accurate enough to facilitate their academic progression. On the contrary, **learner expectations were not met.** To start with, there was a **mismatch between what they knew and what they were being taught.** The materials **did not take cognisance of the diversity of learners**. Materials that were developed **treated all learners as a homogenous group** that was proficient in English and that was familiar with urban socio-economic lifestyles. There was a **culture shock** when some learners from remote areas studied their materials as they heard of certain things for the very first

time. This was even evident in the tutors' comments that learners were not familiar with what they were talking about. The institution could have assisted in the material development by providing material developers with learner profiles. It would have helped if material developers had developed the study materials with the learner profiles in mind as they would have used appropriate, culture-relevant examples that would have made more sense to the learners. The tutors could also have helped to bridge this knowledge gap by inviting learners to use their own examples, and there was no proof of this happening. **Materials are not user friendly** – ODL study materials are by their nature expected to be user friendly as most of the time the learner is alone while interacting with the content. Materials should, therefore, be signposted, have icons and good illustrations that can complement the text as well as enhance learning. BOCODOL materials are not signposted, they have no icons, illustrations are poor hand-drawn artworks and there are no time allocations to guide learners with time management of tasks. The study materials do not take learners' prior learning into account and they use unfamiliar examples, some of which are used in activities. The materials were not aligned to the national curriculum which guided the content of the secondary level courses.

4.6 Conclusion

It is imperative that the language used in ODL is at the level that learners would be able to understand, thus making content accessible to learners. Meanings should be clear for all to understand and at the right level for the programme. In this chapter I described how I analysed my data and offered interpretation of my study, mainly looking at all the feedback received from participants through the different sources and instruments of data collection. I also looked at the data obtained from document evaluation, which were BGCSE English Language study materials and learners' marked assignments. I recorded summaries of the findings. I provided visual representation in addition to graphs, to further explain and interpret my quantitative findings. This was to show trends and patterns that were emerging to facilitate easier interpretation. For my qualitative data I used rich, thick description to interpret my data. I used participants' own words and this made my findings more reliable and valid. The chapter concluded by mentioning the themes that emerged from my findings, namely inadequacy, inefficiency and imprecision. The three themes summarised the status of the study materials that I had evaluated to establish their accessibility to ODL learners, and their contribution to learners' academic progression.

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The next chapter concludes my study. Chapter 5 looks at the significance and implications of the study. I also make recommendations that are guided and informed the findings of my study.

Chapter 5: Significance and implications of the study

5.1 Introduction

In this chapter, I provide an overview of my study and then discuss the significance and implications of my research within the open and distance learning arena, with special reference to secondary school learners. I suggest certain aspects that may help contribute to policy and practice. The chapter further makes recommendations for improved practice of content design and development, as well as delivery of appropriate instructional materials aimed at providing accessibility and mastery of content. This may ultimately lead to distance learners' improved academic progression at the BGCSE level.

5.2 Overview of the study

My study focused on the accessibility of the design, development and delivery of learning materials, and whether the materials contributed to learners' mastery of content, and ultimately aided academic progression. The aim was to evaluate BGCSE study materials and establish their accessibility for secondary school ODL learners. Accessibility in this context implied the ease with which content was fully understood and mastered by learners. To establish this accessibility, I designed and developed document analysis tool that I used to evaluate the study materials. I then used questionnaires and interviews to collect supporting data from my participants.

In **Chapter 1** I stated the purpose of the study which was to establish whether the learning materials were accessible to BOCODOL learners. I. Also contextualised my study and I crafted the following research questions to establish whether materials design, development and delivery had any effect on the accessibility of content:

(i)   What are the key design features of printed study material provided to ODL secondary school learners enrolled with BOCODOL?

(ii)   To what degree does the design, development and delivery of ODL study materials facilitate access to, and mastery of content?

I also defined key terms as used in my study and discussed the research design and methodology, as well as ethical considerations applicable to my study. This chapter also introduced my unit of

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analysis, the BGCSE documents which were the study unit booklets that secondary level learners used for studying. The chapter also introduced my participants, who were material developers, learners and tutors. Their contributions were used to triangulate the data that I had obtained from my document evaluation. I briefly looked at how I would ensure validity and trustworthiness of my study. Anticipated research constraints were indicated as well as ways of minimising them. The chapter concluded with an outline of my study. This was mainly to allow the reader to appreciate the structure and flow of the study.

In **Chapter 2** I reviewed the relevant literature related to my study. I looked at two theories that I believed could best inform my study. I considered the Cognitive Load Theory (CLT) to guide the design and development of instructional material. I also used Gorsky, Caspi and Trumper's Theory of Instructional Dialogue (TID) to facilitate effective interaction of study materials as well as the dialogue in the delivery of ODL content. CLT emphasises the use of examples that are familiar to learners to facilitate better understanding of content in ODL. The theory emphasises learning strategies that include objectives which are always informed by learner needs, and assessment done against stated learning objectives. CLT encourages material that is chunked into small, meaningful pieces to facilitate easy understanding. Mnemonics are used to aid memory and to simplify the real world. This, Swan (2002), and Ariza & Hancock, (2003) believe can help learners grasp content more easily. In CLT, emphasis is placed on the need for learners to carry out tasks. Content developed using CLT guidelines seeks to engage, rather than tell. The Cognitive Load Theory provides ways to facilitate interaction during the learning process. This interaction is further emphasised by the Theory of Instructional Dialogue. This theory encourages a learner to interact with content or subject matter to initiate some form of dialogue or interaction (Gorsky, Caspi & Smidt, 2007). This means that the instructors' "voice" should be heard interacting with the learner from within the text studied. This interaction is reliant on well-developed study materials.

Chapter 3 dealt with the research design and methodology I used for my study. I started off by giving an overview of two major research paradigms: the positivist and the interpretivist. I explained that though I had used both quantitative and qualitative methods for data collection, my study largely used qualitative methods because I had to evaluate study materials, hence I needed to interact with them to reach more informed conclusions. The two designs were used to complement each other. The use of the methods was sequential, with the document analysis done first, followed by quantitative questionnaires and lastly interviews. For the document analysis I

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had designed and developed tools that I used to evaluate the study materials and marked assignment scripts. In addition, I explained the ethical concerns I addressed to protect my participants. I also explained different data collecting techniques used to triangulate my data. This was to also ensure trustworthiness of my study.

Chapter 4 focused on data analysis, interpretation and discussion. In this chapter I presented an analysis of the data carried out during my study. The analysis sought to answer my research questions. My quantitative data were prepared by the institutional statisticians using SPSS version 22 and they produced a computer report which facilitated the analysis of my data. This was then presented using charts, tables and figures. For my qualitative data I transcribed my interviews, then coded the data. I interpreted the interviews data using verbatim, thick descriptions of the participants' views. Out of the coding, I developed categories that I merged to become themes: inadequacy, insufficiency and imprecision. From the findings it became clear that these themes mitigated against facile accessibility of content, hence learners struggled to master the content fully

In **Chapter 5,** I discuss the significance of the findings and their implication for practice. In conclusion, I present my recommendations and identify possible areas for further research. I have endeavoured mainly to stimulate dialogue connected to the design, development and delivery of ODL study materials for secondary school learners.

5.3 Implications of findings

Having considered the interpretation of the findings of the study, I established that there was a need for both the material developers and the tutors to have a clear profile of the target audience. The fact that the needs analysis was not done to inform the material design and development processes, the learner needs and background were not considered. The material developers, for instance, used language that was not suitable to the group as evidenced by the Gunning fog index. Learners came from diverse backgrounds, and again this was not considered during the design and development of the study materials. Instead, the materials assumed that the learners were a homogenous group who had similar exposure. There was also imprecision as the content was not aligned to the national curriculum. Learners, therefore, could not access the necessary content due to the material that was developed in 2001 and never reviewed to date. There is a possibility that learners were exposed to redundant or outdated content. There is, therefore, a

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need for an accessible language that can be used as the medium of instruction in ODL, that would make content easy to understand for learners

Accessible language that can be used as the medium of instruction in ODL

It is non-negotiable for ODL materials to be developed in a language that would assist all learners to understand the content, or to ensure sufficient linguistic scaffolding. Material developers need to appreciate the fact that ODL as a mode of study embraces learners from different backgrounds. More than 80% of learners in Botswana speak Setswana which is the national language, as their mother tongue, (Mooko, 2008; Jotia and Pansisri, 2013). This means that children from Tswana-speaking ethnic groups study English as their second language. Therefore, establishing a target audience profile prior to designing would help material developers to develop relevant and appropriate content. The learner profile would help ODL material developers appreciate that there are learners enrolled in ODL programmes who are non Tswana-speakers. In this case, they learn English as their third or fourth language. This means that learners would be obliged to first learn Setswana, and then English. Studying of Setswana first is necessitated by the fact that Setswana is used in early primary schooling, ie, first 4 years of primary schooling and then from standard 4 English is used. Children of non-Tswana speakers would then be forced to learn in English from standard 4, before they are even proficient in Setswana. The language situation has not been helped by the fact that policy makers have not taken a decision on when a language policy in education will be enacted.

Need for interactive materials

Distance learning study materials should be highly interactive and be able to "converse" or "dialogue" with learners. Though this is a key principle of ODL, it was not implemented when the BGCSE materials under review were developed. A pertinent finding was that ODL study materials were not interactive and as such led to some learners from marginalised communities feeling isolated. Learners from the remote areas could not relate to many of the examples given. During assignment analysis, it was evident from tutor comments that some learners were not familiar with topics they were expected to write about during their creative writing exercises. Jotia and Pansiri (2013, p.103) argue that "*it is important that teachers deliver cross-cultural content so as to accommodate all racial, ethnic and cultural backgrounds.*" Implementing a more interactive approach could ensure that BOCODOL becomes a user friendly, accessible institute to learners from cross cultural and linguistic backgrounds.

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Interactivity in ODL study materials is critical and should not be compromised, as "conversation" in the materials would help learners who are generally isolated while studying. Conversational materials would also help motivate the learners who miss the human voice and face in their learning. This is a view supported by Holmberg (1999, p.59) when he wrote that

> I assume that if a course consistently represents a communication process that is felt to have the character of a conversation, then students will be more motivated and more successful than if it has an impersonal textbook character. The conversational character is brought about both by real communication (students' assignments, comments on these, telephone, email, fax and postal support), and by a conversational style in printed and recorded subject matter presentation which attempts to involve the students emotionally and engage them in a development and exchange of views

Greater interaction in ODL could thus lead to learners accessing and eventually mastering content with ease, even challenging content, if well designed. Regarding interactivity, Holmberg (1999, p.59) contends that *"The conversational approach is meant to help students to handle the difficulties of study, including those concerned with the reading of difficult text."* Usun (2011) reiterates some of the suggestions raised by BOCODOL learners that various media, especially television and radio, should be used to make content more accessible by engaging learners more fully. This was borne during their interviews with the researcher. Most of the participants suggested the use of other means such as social network platforms, especially Face-book, Whatsapp and short message services (sms), to engage them. This, itself, suggested that ODL study materials might be more accessible and hence, could not adequately engage the learners.

Both tutors and learners suggested that BOCODOL should also provide online courses as people are now living in a technology centred and driven era. Learners have suggested that online courses would facilitate the necessary interaction they need to break isolation that is typical of the ODL mode. Dan (2012) explained that providing online courses would give opportunity to many more as it has the potential to reach a large number of learners simultaneously. This view is shared by Miller (1996, p.41) who posits that *"Appropriate tools such as email, audio-conferencing and online discussion boards were needed to minimise the isolation of the individual learner and open up new opportunities for the learner to participate in a learning community."* BOCODOL could leverage on the use of ICTs to facilitate teaching and learning to extend access. The private sector has now partnered with the Ministry of Education and Skills

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Development to facilitate installation of ICT equipment in secondary schools through the Adopt-a-School initiative. The equipment includes solar powered devices which can be used in remote areas where there is an abundance of solar energy.

For any institution to be able to utilise interactive strategies, it is important to first of all establish a profile of their learners. The profile would help them appreciate the diversity of their learners in terms of their cultural, social and economic backgrounds. Usun (2011, p.7) observed that *"when designing distance learning materials, the instructional designer first should ask a variety of questions about the characteristics and needs of the distance learners."* This would help writers develop more relevant and inclusive content, thus increasing accessibility.

Need for highly developed learning support system

When writing about learning support, Dillon and Blanchard (1991) made an observation that whatever the support is geared towards distance learners, it should be designed in such a way that it addresses the learners' unique needs, as well as their unique characteristics. They also observed that *"one important factor that contributes to success is the motivation or confidence of the learner. Less motivated students may benefit from interaction with the teacher or tutor. Less confident learners may need more group support than more confident learners,"* (p.7). From both learners' interviews and questionnaire responses, it was clear that learners were dissatisfied with the kind of support they got from BOCODOL as an institution. As mentioned earlier in the study, BOCODOL learners expect to be taught just as they were taught in conventional schools. To avoid this dependency-syndrome of ODL learners on tutors, it is important to put into place an aggressive and robust learning support strategy and measures. With these in place, learners would feel motivated, with the zeal to move on even with minimal tutor support. The findings of my study also showed a gap in learner expectation and orientation. Most of the learners were joining the ODL system from conventional schooling system. They thus needed to be fully inducted for independent study, considering that some were as young as seventeen years.

Duranton and Mason (2012, p.81) observed that *"... distance delivery can have a very positive impact on recruitment, but that the quality of students' experience depends upon the capacity of the organisation to support course development and delivery, both in terms of instructional design and management of student support."* Even with the necessary learning support mechanisms in place, it remains necessary that tutors should provide the support expected of them. In an ODL setting, as already mentioned, a human "voice" should be heard even in the

study materials learners use to study. Having the human being attending tutorials would be an advantage for learners. During my interviews with the learners, most of them expressed their frustrations over tutors who did not attend sessions and who did not give them any form of support whatsoever. Xiao and Hurd (2010) observed that a tutor is one of the key factors that can either motivate or demotivate learners studying through the distance mode. Dan (2012, p.2) corroborates their observation by adding that *"It does help to get in the classroom once in a while and see your students react in person."*

From the data collected from BOCODOL learners who participated in my study, it is clear that the tutors are not giving learners the necessary support as they ought. Not a single one of the analysed assignments had feedback that was either corrective or pastoral as is expected in distance learning. The feedback provided to learners was lacking in details and not at all helpful as reflected in **Table 13** of Chapter 4. Learners also shared that tutors were hardly available during tutorials and this, therefore, denied them an opportunity to discuss the content or appropriate learning strategies they could better adopt to access the learning material. Lack of moderation of learners' marked scripts was evident from the evaluated scripts, which did not provide learners with any form of learner support, counselling or guidance on how they could improve their academic ability despite the very low scores.

This study calls for the immediate updating of study materials. The personnel in the Ministry of Education and Skills Development, together with other stakeholders, especially providers of ODL, need to look into their existing policies and improve on them to remain relevant to ODL institutions. Policies should be developed on the basis of contemporary issues for them to remain relevant. Once developed, policy needs to be implemented to ensure that they contribute to human resources development of the country.

Policy formulation and implementation – There is an immediate need to develop and implement policies that could benefit learners from different backgrounds. The Revised National Policy in Education (RNPE) mentions inclusive education and this is not evident in the materials used by ODL learners. Policy makers should appreciate the diversity of Batswana as a nation, and should engage learners to establish their needs, for the materials to remain relevant. There should be careful selection and training of material developers. The same should be done with tutors who help with the content delivery, for learners to access and master the content. Above all, policy should embrace the uniqueness of learners. BOCODOL as an institution needs to have

a course design and development policy. The policy needs to encourage the systematic updating of study materials for content to remain relevant. As of now, in 2015 learners still use study materials that were developed and first used fourteen years ago. The policy needs to also inculcate the elements of monitoring and evaluation to ensure adherence and implementation. The Ministry of Education and Skills Development needs to develop a more inclusive and balanced curriculum that would include socio–economic inclusion for all. Both material developers and tutors need to be familiarised with this policy to be effective in the development and delivery of content.

Learners in ODL are not given an opportunity to study all the subjects that other students in CCL study, especially sciences and practical subjects such as Home Economics and Design and Technology. This clearly disadvantages ODL learners as they cannot compete with learners who had studied practical subjects I have just alluded to. The government needs to fully support ODL just as it does with CCL to further expand equitable access to quality education to all. The government of the day in Botswana continues to make promises to improve ODL, but the nation still has to see the results.

Support to include ICT and reference books - ODL should be supported by ICT to improve access and for it to be seen as an empowerment vehicle. We are living in a digital world and conventional schools are embracing technology and even making it part of their curriculum. This is currently a move just envied by distance learners, especially those in remote and rural areas. Opportunities are available, such as solar tablets and solar-operated radios that can be used to introduce ICT in ODL. Mobile libraries also need to be introduced to inculcate the culture of reading amongst ODL learners.

English language proficiency - There is a need to improve English language proficiency of both tutors and learners. It is necessary to put specific interventions in place to promote English language proficiency. One way would be to scaffold tasks that can promote proficiency of English. There must be a systematic selection of both material developers and tutors who are proficient in English. This should be made both a policy issue and practiced to ensure proficiency is cascaded to learners. It is important at this point to have in place monitoring mechanisms to ensure that policy is implemented. Materials should be developed as stipulated in policy documents and stakeholders need to be exposed to theories of distance learning to better understand the philosophy of ODL.

Needs assessment of learners – For ODL institutions and the education fraternity to remain relevant, there is a need to ensure that before the material development process starts, a thorough learner needs analysis is carried out to inform the learners' profile. This should also include learner expectations as they can help inform material developers about what learners already know. The materials would then be developed after the necessary consultations. Materials developed for ODL learners should appreciate diverse learners' backgrounds in order for them to be able to relate to the new knowledge and to embrace it. Material developers for BGCSE secondary study materials need to know the proficiency of English for these learners: for speaking, writing and even reading.

The section below discusses the significance of the study.

5.4 Significance of the study

There is limited research made on the field of designing and developing ODL study materials, especially for a developing context. As a result, more research initiatives have to be undertaken about the nature and quality of ODL study materials, and learning support offered to ODL learners. My study has confirmed what research has already highlighted: the necessity of designing and developing materials that are accessible and inclusive in terms of content and language level. Study materials need to be guided by frameworks when developed. They should also relate to learners' socio-economic background as well as to their prior learning. In this way learners can easily relate to the study materials and this might have a positive influence on their academic progression and mastery of content. Apart from perceptions and experiences regarding their study materials, gathered from material developers, learners and tutors using interviews and questionnaires, the material evaluation tool I designed laid the foundation for institutions to ensure that study materials were accessible to learners. Learners came from different backgrounds but used the same materials which had been developed for a more homogeneous group. They even sat for exactly the same examination. The findings of my study were that ODL learner performance at secondary schools remained the same irrespective of availability of resources that supported learning, as shown in Chapter 1, **Table 1**. These findings remain crucial, indicating that ODL material designers should look seriously into their processes and procedures for material design and development, and see how best they can make the material more accessible to contribute to learners' academic progress.

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Distance learners in my study experienced isolation as they could not adequately master content which was often missing, and some of the examples used were foreign and detached from learners, as discussed in Chapter 4. The way content was delivered was a deviation from what most of them were used to, where a teacher would provide all the information, and they were not fully inducted to this shift to ODL from the traditional or conventional classroom system. It was clear, during my study, that recommendation such as those regarding teaching young children using their home language were never implemented. Policy and practice were not aligned, and this may have had a negative effect on ODL learners, possibly contributing to poor performance.

From this study, I noted that study materials were developed with an assumption that all learners were proficient in reading, writing and speaking English, which was the language of instruction. This proved not to be true. Learners, majority of who spoke and understood Setswana, struggled to succeed in their studies using English because their tutors also lacked proficiency in the language. The study further showed a gap created by the absence of dialogue in ODL study materials as material developers were not guided by any theory, such as the Theory of Instructional Dialogue which encourages use of dialogue in ODL materials. This led to learners performing badly both in their assignments and national examinations.

The study has established that there is a need for the Ministry of Education and Skills Development to develop an inclusive curriculum for ODL. The current curriculum does not include learners from remote and rural areas of Botswana, and further assumes that all learners have the same background and understand concepts the same way. This has seen a continuous decline in performance of rural schools as well as schools in western and north-western parts of Botswana, (Sundaystandard newspaper, 2015). These are areas with high percentages of non-Tswana native speakers and their failure to master content could be linked to their lack of proficiency in English. It became apparent, therefore, that content accessibility was limited by a number of factors that included poor proficiency in English, lack of orientation to ODL as a learning mode and lack of an inclusive curriculum.

My study has again established a training gap for both ODL material developers, ODL learners and ODL tutors. It was clear during the study that ODL material developers were not fully trained to design and develop materials for ODL. The "human voice" was absent in the materials. It was clear that designers of study materials did not cover all the syllabus content. It has also become apparent that after they were enrolled, learners were not fully inducted to ODL

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for them to fully appreciate what it entailed, and what their role was in their learning process. There were also tutors who facilitated BGCSE subjects whilst they were teaching either in primary or junior secondary schools. These are levels lower than BGCSE and one would question the quality of work these tutors offered, and the accuracy of the content they offer.

For my study, I had three groups of participants, across the six research sites. These people helped in triangulating data from my document analysis. I had developed questionnaires and interview protocols that I used for this study. My main contribution to this study however, is more practical than scientific or theoretical. I focused on accessibility of language used to design and develop ODL study materials for secondary level students, the majority who are from marginalised communities. I used the Gunning fog index to establish whether these ODL learners could access instructional materials, hence master the content. This led me to extend existing document analysis tools, **Appendix 6**. I was guided by the existing ones from the Commonwealth of Learning (COL) and South African Institute of Distance Education (SAIDE) but looked more closely at language as a possible barrier to accessing content, specifically in instructional materials used at secondary school level.

5.5 Limitations of the study

This section summarises the overall limitations of my study. The use of mixed methods was good practice. However, the exercise proved very time-consuming. This included using the interviews, and document analysis tool. Both exercises needed time and actual engagement with study materials, which were my study units. The participants were not always punctual and in some sites I had to do repeat visits, such as Matsha in Kang, and Linchwe in Mochudi. Distance between home base and research sites was also problematic.

At the start of the research exercise, I discussed the questionnaires with respondents to make sure they understood what was needed from them. However, some participants answered questions that they were not supposed to answer. For instance, one question wanted to establish if learners received all their materials at enrolment. They had to answer with a simple "Yes" or "No". The next question was meant only for those that would have answered with a "No" because it wanted to establish how long they had to wait to be given the pending study materials. Many of those who said "Yes" they received all the materials also responded to this question. The problem was

that I was not sure if they did not read the instructions correctly or whether they misunderstood the question. This occurred with questions that needed to be followed up with more questions.

In Botswana, there was no other ODL institution to compare with BOCODOL for best practice. As such using BOCODOL as the only ODL institution had its shortcomings. My research was, therefore, largely informed by the practice of just one institution, and the rest was from the literature. The available literature was mainly on developing study materials for tertiary institutions such as one by Reed (2010), Sibomana, (2014) and Stewart and Lopes (2015). Another limitation was that as a researcher, although I have a good understanding of English language, I do not have a linguistic background. This might have impacted on my understanding of certain issues, and I may have looked at language matters differently if I had been a linguist.

5.6 Recommendations for further research

The ODL institutions need to have in place appropriate training plans to ensure that quality is not compromised when study materials are developed. Botswana education policies, especially the Revised National Policy in Education (RNPE), consider Botswana as a homogeneous society. The absence of the language policy in education disadvantages ODL learners even more, and those learners who struggle with learning of English are the most affected. There is also no way developing contexts such as Botswana can adequately address the perceptions and experiences that learners shared during the study especially at secondary school level. This study will provide recommendations that the countries could use to inform the design, development and delivery of ODL secondary school content.

Findings from this study may bring some engagement between stakeholders to improve practice. Policy makers and all ODL stakeholders can now address the issues raised in the study. Policy makers can liaise in their various offices and see how best they can use these findings to inform and improve their operations. They can also use the findings to pave the way, giving ODL learners opportunities to progress with their studies together with those studying in the conventional schooling system. Policies should be developed to respond to learner needs, as well as to embrace their existing knowledge. Practitioners in ODL can, through their various associations and forums, engage and see how they can improve on the issue of ODL delivery and support.

There is great potential for further research in the area of design and development of ODL materials. The following can be used to guide future research:

- The role of learner profiles and expectations in the design and development of ODL study materials in developing contexts
- Developing ODL materials for remote, marginalised learners via e-platforms
- Aligning Open and Distance Learning and Conventional Classroom Learning qualifications
- Solar radios and tablets: gateways to ICT mediated distance learning
- Language and culture: enigmas to successful teaching and learning in distance education.

5.7 Conclusion

In this chapter, I summarised my study on the design, development and delivery of ODL print materials and discussed its significance, implications and the recommendations for further research. The findings of my study have confirmed that several variables militate against accessibility of study materials used by secondary school level learners enrolled with BOCODOL.

Material developers for ODL study materials need to be well versed with the Cognitive Load Theory and the Theory of Instructional Dialogue to develop highly interactive and accessible study materials. Well designed and appropriate study materials could increase accessibility and facilitate progression of ODL learners in the remotest corners of rural parts of our developing worlds. With the design and implementation of both inclusive policies and curriculum, this can be possible. Accessible open and distance learning materials, coupled with effective learning support initiatives, can contribute to the development of all people, irrespective of age, gender or social status.

Constitutionally, no Botswana citizen should be excluded by policy or practice from obtaining an academic qualification. ODL is well established in this country and sufficient structures and resources are in place to provide those wishing to enroll with a sound learning opportunity. Accessibility could be increased by paying specific attention to how instructional materials are designed and developed for the 21st Century ODL learner who already faces many circumstantial challenges and should not be further disadvantaged by language barriers, inaccurate or

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incomplete study materials. Stakeholders in ODL, who include learners, tutors and material developers need to work together to ensure that the ideals of Botswana Vision 2016 are realised.

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APPENDICES

Appendix 1   Map of BOCODOL regional centres

Appendix 2   Material developers' questionnaire

WRITERS' QUESTIONNAIRE

You have given informed consent and your participation in this study is thus voluntary. I undertake to ensure that any information you provide will be treated with utmost confidentiality. To protect your privacy, no identifying details will be recorded in the final research report or any related documents. Numerical codes will be used to replace any personal identifiers when the results are collected. Thank you for being willing to participate in my research project and for taking the time to complete this questionnaire.

Thank you for your time.

Please answer the questions by marking the appropriate block with a cross (x) or writing in the space provided.

For office use only

SECTION A – BIOGRAPHICAL INFORMATION

Questionnaire number   **V0**

1   Age on 31 December 2013 _____ years   **V1**

2   Gender:

1 Male		2 Female		**V2**

3   Occupation:

		V3
1 Junior Secondary Teacher		
2 Senior Secondary Teacher		
3 Tertiary/Higher Education Lecturer		
4 Other (specify)		

4   ODL Experience

		V7
1 Little experience with no training		
2 Little experience with basic training		
3 Experienced writer and ODL practitioner		
4 A seasoned / well rounded ODL practitioner		

SECTION B: MATERIAL DEVELOPMENT

5 How did you become involved with the development of BOCODOL study materials?

1 BOCODOL advertised, I applied and was employed	
2 I was head hunted	
3 I was referred by a friend and got the job	
4 Other	

6 Which module(s) did you develop for BOCODOL?

Module Number	Module title	VO	
1	**Entertainment**	**V1**	
2	**Famous People**	**V2**	
3	**Myths and Legends**	**V3**	
4	**Tourism**	**V4**	
5	**Fitness**	**V5**	
6	**Fashion**	**V6**	
7	**Sports and Leisure**	**V7**	
8	**Our General Health**	**V8**	
9	**Pollution**	**V9**	
10	**Wildlife and Nature**	**V10**	
11	**Water and Conservation**	**V11**	
12	**Citizens of Global Village**	**V12**	

7 If you had a choice, which language would you have preferred to use to write the modules?

1 English		
2 Setswana		
3 Other (specify)		

8 Please indicate what best relates to you as a developer of ODL print material:

	1 Yes	2 No
1 We were adequately trained to develop materials for distance learners		

2 I was in constant touch with programme development staff at BOCODOL for support and guidance when developing distance learning materials		
3 We were made aware of different theories to inform our writing before we started the development of the distance learning modules		
4 I used simple language to facilitate understanding when developing distance learning materials		
5 I related new ideas to learners' own experience when writing		
6 I generally engaged learners by giving activities within the text		
7 I used illustrations to further explain difficult concepts		

9 Tick all factors that relate to the development process of the material(s) you wrote;

1 Guided by the objectives of the national curriculum	
2 Wrote content just like I write my notes in a conventional class	
3 Wrote as a team	
4 Editors quality assured the draft materials	
5 The writing team often failed to meet the agreed deadlines	
6 The writers took long to augment corrections from editors	
7 Provided summaries and introductions in my lessons	
8 Only wrote what I considered necessary to avoid bulky modules	
9 Provided activities when writing modules	
10 Provided feedback to activities immediately following the activity	
11 Provided feedback to activities at the end of the module	

10 I encouraged easier understanding of the content by learners when developing distance learning materials by:

1 Giving them more work to do on their own	
2 Simplifying concepts and terms in context	
3 Italicising and bolding key words	
4 Using audio and video tapes to explain difficult concepts	
5 Using illustrations to further explain difficult content	
6 Other	

11   Please rate each one of the following statements about the printed study materials you developed:

	1 Strongly agree	2 Agree	3 Undecided	4 Disagree	5 Strongly disagree
1 The objectives of the lessons I developed were very clear					
2 The content has at the right level of the BGCSE programme					
3 Examples I gave were relevant to the learners context					
4 Examples I gave were diverse to suit different learners					
5 Assignments helped learners understand the content of the module better					
6 The content was written in a simple, easy to understand language					
7 Materials engaged learners during their studies					
8 In-text activities included in the study material helped learners study effectively					
9 Illustrations used in the study materials are clear and relevant to the content					
10 Learners are given in-text assessment to help with their revision					
11 The materials are not bulky and easy to carry around					
12 The study materials are colourful and attractive to the eye					

12 Indicate what you consider to be true regarding the materials you tutor.

	1 Yes	2 No	3 Not Sure
1 Materials are arranged in manageable chunks			
2 Introductions and summaries are helpful to the learner			
3 Illustrations enhance learning			
4 Materials are written at the right BGCSE level, and not difficult to understand			

13 Give your ratings based on your knowledge of study materials

	1 Excellent	2 Very Good	3 Good	4 Poor
1 General Presentation (i.e.) font and interactivity				
2 Language level				
3 Structure (i.e.) illustration				
4 Self-Assessment Exercises				
5 Feedback to Self-Assessment Exercises				

Once more, thank you very much for your time.

Appendix 3   Learners questionnaire

Please answer the questions by marking the appropriate block with a cross (x) or writing in the space provided.

For office use only

SECTION A – BIOGRAPHICAL INFORMATION

Questionnaire number

V0 ☐☐☐

1   Age _____ years

V1 ☐☐

2   Gender: | 1 Male | | 2 Female | |

V2 ☐

3   Occupation:

1 Educator	
2 Health worker	
3 Farmer	
4 Unemployed	
5 Other (specify)	

V3 ☐

4   Study centre:

1 Gaborone Secondary School	
2 Diphuduhudu Primary School	
3 Takatokwane Primary School	
4 Gantsi State Prison	
5 Linchwe Secondary School	
6 Matsha Community COLlege	

V4 ☐

5   Length of study at BOCODOL: _____ years

V5 ☐

6   Preferred language of
     instruction:

1 English		
2 Setswana		
3 Other (specify)		

V6 ☐

7   Marital status:

1 Married	
2 Single	
3 Cohabitating	
4 Divorced	
5 Widowed	
6 Other (specify)	

V7 ☐

SECTION B – STUDY MATERIALS (MODULES)

8   Do you receive **all** materials at enrolment?

1 Yes		Proceed to question 10
2 No		Proceed to question 9

V8 ☐

9   If you answered "No" to question 8. How long do you usually have to wait
     to get the rest of the materials?

1 Less than 14 days	
2 14 – 30 days	
3 31 – 60 days	
4 More than 60 days	

V9 ☐

10	If you answered "Yes" to question 8. Do you see a need to read other books after going through your study modules?	**V10**

1 Yes		Proceed to question 11
2 No		Proceed to question 12

11 If you answered "Yes" to question 10. Why do you have to read other books after studying your modules? Mark all applicable.

1 Information is scanty		**V11.1**
2 Information is outdated		**V11.2**
3 I do not understand the content in the modules		**V11.3**
4 The language used in the modules is difficult to understand		**V11.4**
5 Other (specify)		**V11.5**

12 Do BOCODOL study materials encourage independent learning?

1 Yes		**V12**
2 No		

13 Please rate the extent to which you use each one of the following interventions:

	1 Always	2 Often	3 Sometimes	4 Seldom	5 Never		
1 Telephone tutorial						**V13.1**	
2 E-mail						**V13.2**	
3 Audio tapes						**V13.3**	
4 Video tapes						**V13.4**	
5 Face-to-face sessions						**V13.5**	
6 Fax						**V13.6**	

14   Please rate each one of the following statements about your printed study materials:

	1 Strongly agree	2 Agree	3 Undecided	4 Agree	5 Strongly disagree		
1 The course outline of the module is provided						**V14.1**	
2 The print materials provided are easy to understand						**V14.2**	
3 In-text activities included in the study material helps me to understand the content						**V14.3**	
4 The amount of work covered is manageable						**V14.4**	
5 Assignments help me understand the contents of the module better						**V14.5**	
6 I feel very alone when preparing for exams						**V14.6**	

7 I need more help to understand the study material						**V14.7**	
8 The study materials help me to prepare well for the exams						**V14.8**	

Once again, thank you for your time.

Appendix 4 Tutors questionnaire

TUTORS' QUESTIONNAIRE

You have given informed consent and your participation in this study is thus voluntary. I undertake to ensure that any information you provide will be treated with the utmost confidentiality. To protect your privacy, no identifying details will be recorded in the final research report or any related documents. Numerical codes will be used to replace any personal identifiers when the results are collected. Thank you for your willingness to participate in my research project, and for taking the time to complete this questionnaire.

Please budget approximately **20 minutes** to complete the questionnaire.

Please answer the questions by marking the appropriate block with a cross (x) or writing in the space provided.

SECTION A – BIOGRAPHICAL INFORMATION

Questionnaire number…………….

V0

1   Age on 30ᵗʰ June, 2014: _____ years

V1

2   Gender: | 1 Male | | | 2 Female | **V2**

3 What is the language you speak best?

Setswana	
English	
Other (specify)	

V3

4. What is the highest level of education you have attained?

Diploma in Secondary Education	
Degree in Secondary Education	
Postgraduate qualification	
Other	

V4

5 What is your main occupation (day job)?

Junior secondary teacher	
Senior secondary teacher	
Lecturer	
Unemployed	
Other (specify)	

V5

6   Which study centre do you tutor at?

Gaborone Secondary School	
Diphuduhudu Primary School	
Takatokwane Primary School	
Gantsi State Prison	

V6

Linchwe Secondary School	
Matsha Community College	

7 How far do you stay from your study centre?

Less than 1 km	
2 – 5 km	
6 – 10 km	
11 – 15 km	
Other	

V7

8 How do you get to the study centre?

Use my own car	
Use a taxi	
A friend drives me there	
Other (specify)	

V8

9 How much tutoring experience do you have in ODL?

I was an ODL tutor before joining BOCODOL as a tutor	
I have less than 3 years' tutoring experience at BOCODOL	
I have been an ODL tutor for more than 3 years at BOCODOL	

V9

SECTION B: TUTORING

10 Period of tutoring at BOCODOL: _____ years and ……… months

11 If you had a choice, which language would you prefer to use when conducting the tutorials?

Afrikaans	
Ikalanga	
Sekgalagadi	
Setswana	
Other (specify)	

12 Which language do you actually use to tutor to help learners' understand the content?

English	
Setswana	
Other (specify)	

13 Please indicate what is applicable to your tutorial sessions:

	1 Yes	2 No
Learners frequently attend tutorial support sessions		
Learners use tutorial sessions to study modules		
I relate new ideas to learners' experiences during tutorials		
I am generally satisfied with activities that take place during tutorial contact sessions		
I am satisfied with English as the language used in tutoring		

14 My tutoring style can best be described as follows:

_____

	Y	N
I encourage collaborative learning		
I use mainly talk and chalk method		
I promote individualised learning		
I use mainly the lecture method		
I deliver content as in a conventional classroom		
I deliver the content in the language best understood by learners		
I only facilitate learning by highlighting areas learners consider difficult		
I wait for learners to ask questions before discussing any topic		
I provide answers when learners fail to respond		
I allow learners to interact among themselves and come up with correct answers		
Other		

15 I support slower learners during tutorials by:

	Y	N
giving them more work to do at their own pace		
taking them for extra lessons at extra costs		
helping them outside scheduled tutorials for free		
Other		

16 Rate the extent to which you use the support measures listed below for your tutorials.

	1 Always	2 Often	3 Sometimes	4 Seldom	5 Never
Telephone tutorial					
E-mail					
Audio tapes					
Video tapes					
Face-to-face sessions					
Fax					

	Y	N
They attend support sessions willingly/eagerly/enthusiastically		
The content is difficult for them to understand		
The content is too easy for BGCSE level		
The content can help learners pass exams		
The content they study is irrelevant		
The English is too complicated for learners to understand content		

SMS					

17 What are some of your views about the distance learners you tutor?

	Y	N
They attend support sessions willingly/eagerly/enthusiastically		
The content is difficult for them to understand		
The content is too easy for BGCSE level		
The content can help learners pass exams		
The content they study is irrelevant		
The English is too complicated for learners to understand content		

SECTION C: STUDY MATERIALS

18   Please rate each one of the following statements about the printed study materials you use to tutor:

	1 Strongly agree	2 Agree	3 Undecided	4 Disagree	5 Strongly disagree
The objectives of the lessons I tutor are clearly stated					
The content is at the right level for the BGCSE programme					
Examples given are relevant to the learners					
Examples given are diverse to suit different learners' cultural backgrounds					
Assignments help learners understand the content of the module better					
The content is written in a simple, easy to understand language					
The size of the book is not heavy for a distance learner to carry around					
Study materials keep learners active during their studies					
The print size is large enough to facilitate individual study					
Illustrations used in the study materials are clear					
Illustrations used in the study materials are relevant to the content					
Illustrations enhance learning					

There are adequate illustrations and visual material to facilitate learning				
Content is factually accurate				
Materials are arranged in manageable chunks				
Materials consider learners' different learning styles				
Introductions and summaries in the materials are helpful to the learner				
Vocabulary in the materials is easy for learners to understand				
Learners' English language proficiency has been taken into account by the materials developer				
The English language oral ability of the learners I tutor is good				
The English language reading ability of the learners I tutor is good				
The English language written ability of the learners I tutor is good				

19 My opinion of the study materials I use while tutoring is:

	1 Excellent	2 Very Good	3 Good	4 Poor
General presentation (i.e. font,colour, cover attractiveness etc)				
Durability (i.e. binding, cover etc)				
Language level				
Layout of text i.e. font size, type, space, headings, pictures ect)				
Self-assessment exercises				
Feedback to self-assessment exercises				

SECTION D - ASSESSMENT

20 Tick the options that best describe the assessment of the learners you tutor.	1 Yes	2 No	3 Not Sure
Learners are given revision tests to check their understanding of content			
Tests and assignments model true examination questions			
Learners are keen to sit for the tests			

Learners are happy with the language used as medium of instruction during assessment			
Tutoring conditions are flexible enough to empower learners as future ambassadors and agents of their own languages.			

21 Put a cross next to those options that best describe how you
provide feedback to your learners assessment;

	Y	N
Learner feedback is provided immediately		
I give written feedback and post it to learners at a later stage		
I provide learners with correct answers during the session/later		
I explain to learners why they got the assessment wrong		
I leave learners to search for the correct answers themselves		
I counsel learners and provide right answers		
I provide written comments on assignments as feedback		
I suggest that the learners should repeat the assessment and re-submit		

22. Go through the following questions and provide your feedback in the space provided.

(a) What is the best experience you got from being an ODL tutor at BOCODOL?

(b) What is the worst experience you had as a tutor for an ODL institution like BOCODOL?

(c) Given the opportunity, what would you do differently to improve your tutoring and tutorial sessions in general at BOCODOL?

(d) Do you have any suggestion or comment you wish to make about tutoring BOCODOL learners?

Once more, thank you very much for your time.

Appendix 5   Interview schedule

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

INTERVIEW SCHEDULE (INITIAL INTERVIEWS)

SITE	DATE	TIME	COMMENTS
GSS Learning Centre	19 January 2013	0930 hrs – 1600 hrs.	Do both one-on-one and group. Arrange for next session as necessary.
Linchwe Learning Centre	2 February 2013	1000 hrs – 1600 hrs	Do both one-on-one and group. Arrange for next session as necessary
Takatokwane Learning Centre	16 March 2013	1000 hrs – 1600 hrs	Do both one-on-one and group. Arrange for next session as necessary
Matsha Learning Centre	27 April 2013	0900 hrs – 1530 hrs	Do both one-on-one and group. Arrange for next session as necessary
Diphuduhudu/Kaudwane Learning Centre	18 May 2013	1000 hrs – 1500 hrs	Do both one-on-one and group. Arrange for next session as necessary

NB: Ensure dates of next sessions are scheduled.

Appendix 6   Material development rubric

Document analysis for Botswana College of Distance and Open Learning BGCSE English Study modules

MODULE / UNIT: _____   `**DATE:** _____

Guide: 0 – Fails to meet criterion   1 – Unsatisfactory   2 – Marginal   3 – Accepted   4 Meets all criteria

Criterion/ descriptor	Performance indicators	Evidence of conformity	Quality measure
	To what extent…		
Physical appearance of study materials	Is the title clearly written?		0 1 2 3 4
	Is the title appropriate for the content?		0 1 2 3 4
	Does the design of individual courses contribute to achieving the overall progamme objectives?		0 1 2 3 4
	Is the cover page visually pleasing?		0 1 2 3 4
	Is the binding strong and durable?		0 1 2 3 4
	Are the materials light/convenient to carry around and use?		0 1 2 3 4
	To what extent…		
Layout and structure	Has the syllabus been covered?		0 1 2 3 4
	Is the font readable? (size, font)		0 1 2 3 4
	Are headings technically correct: numbering, size?		0 1 2 3 4
	Does the text that follows match the headings?		
	Do icons tell students what different tasks require?		0 1 2 3 4
	Are icons consistently used?		0 1 2 3 4

	Are points of emphasis highlighted in modules?		0 1 2 3 4
	To what extent…		0 1 2 3 4
	Is the language used clear and unambiguous? Fog index)		0 1 2 3 4
	Is the language used suitable for a non-native speaker of English?		0 1 2 3 4
Language	Is the readability index acceptable for the level of the programme?		0 1 2 3 4
	Has the study guide been edited for grammar mistakes?		0 1 2 3 4
	Is the content written using active voice?		0 1 2 3 4
	Is the "tone" varied?		0 1 2 3 4
	Is the language using multi-cultural and gender sensitive?		0 1 2 3 4
Criterion/ descriptor	**Performance indicators**	**Evidence of conformity**	**Quality measure**
	To what extent…		
	Is the content aligned with the national curriculum??		0 1 2 3 4
	Is the content overloaded for the BGCSE level?		0 1 2 3 4
Content	Are new concepts and terms highlighted in the text?		0 1 2 3 4
	Are concepts explained using relevant examples?		0 1 2 3 4
	Are concepts and examples linked to learners existing knowledge?		0 1 2 3 4
	Do learners have a glossary explaining all new concepts and terms?		0 1 2 3 4

Criterion/ Descriptor	Performance indicators	Evidence of conformity	Quality measure
	To what extent…		
Illustrations	Are are illustrations used as pedagogical tools?		0 1 2 3 4
	Do illustrations clarify/complement the text?		0 1 2 3 4
	Is the quality of illustrations (size, culture-sensitive, self-explanatory/understandable)?		0 1 2 3 4
	Do illustrations encourage learner motivation?		0 1 2 3 4
Teaching strategies that facilitate interactivity	**To what extent…**		
	Do the materials take into account ICT integration to facilitate learning?		0 1 2 3 4
	Are ICT advances used relevant to the text?		0 1 2 3 4
	Is a learner-centred approach used? Is independent learning encouraged?		0 1 2 3 4
	Do teaching strategies incorporate diversity?		0 1 2 3 4
	Are materials interactive enough to break learner isolation?		0 1 2 3 4
	Are activities clearly sign posted?		0 1 2 3 4
	To what extent…		
User friendliness	Have authors been profiled in the study material?		0 1 2 3 4
	Is the reader oriented in terms of course content?		0 1 2 3 4
	Have objectives/outcomes per section been provided?		0 1 2 3 4
	Is the time needed to interact with, and complete different parts of the content stated?		0 1 2 3 4
	Are units presented in manageable chunks?		0 1 2 3 4

Criterion/ descriptor	Performance indicators	Evidence of conformity	Quality measure
	Is immediate feedback provided to in-text activities?		0 1 2 3 4
	Are examples used relevant to the learners' diverse contexts?		0 1 2 3 4
	Does content lend itself to collaborative work?		0 1 2 3 4
	Are the learners provided with list for further reading?		0 1 2 3 4
	Is the student addressed directly in the 2nd person (you)?		0 1 2 3 4
Criterion/ descriptor	**Performance indicators**	**Evidence of conformity**	**Quality measure**
	To what extent…		0 1 2 3 4
	Are self-assessment activities (SAA) provided?		0 1 2 3 4
	Is constructive alignment evident in the materials?		0 1 2 3 4
Assessment	Are assessment items varied to maintain interest?		0 1 2 3 4
	Is the formulation of the assignments well scaffolded?		0 1 2 3 4
	Is the tutor feedback supportive?		0 1 2 3 4
	Does feedback for both SAA and TMA help learners identify their mistakes/misconceptions?		0 1 2 3 4
	Are tutor marked assignments (TMA) provided with the material?		0 1 2 3 4
	Is feedback provided immediately in the text?		0 1 2 3 4

Appendix 7   Assignment feedback evaluation rubric

DOCUMENT ANALYSIS FOR ASSESSING ASSESSMENT / ASSIGNMENT FEEDBACK

Introduction: The researcher used document analysis to assess if tutor feedback / comments assisted learners in their studying.

Assessment / assignment Number:……………

Guide;   0 – Fails to meet criterion

1 – Unsatisfactory

2 – Marginal

3 – Good

4 – Excellent

Tutor Feedback	RATING				
	4	**3**	**2**	**1**	**0**
1. Helped learner appreciate the mark he/she obtained					
2. Helped learner understand where he/she had gone wrong					
3. Helped learner identify errors in her/his answers					
4. Provided learner with remedial strategies to deal with errors					
5. Gave learner information about her/his own performance, especially where he/she went wrong					
6. Constructive, encouraging and motivating the learner to keep trying harder to do better next time					
7. Informed learner of her/his achievement level					
8. Provided appropriate way of responding to questions, where applicable					
9. Pointed out that which should be included in a good answer					
10. Highlighted to learner how he/she should respond to gain a good mark					
11. Provided coaching on how to best respond to questions next time					
12. Provided confidence that learner has potential to do better					
13. Provided guidance to the learner					
14. Provided corrective feedback					
15. Provided mutual feedback					

Appendix 8 **Sample of journal recordings**

<u>SAMPLE JOURNAL ENTRIES</u>

Thursday 4th October 2012

Venue: Matsha Learning Centre

Meet a large group of learners, about 40, in a single class. I am introduced to learners at Matsha Learning Centre. Learners immediately start to whistle and make some funny noises upon learning that I will be doing my research for my PhD study with them. The LTC immediately calls them to order and they keep quiet, many of the younger one giggling – to the irritation of the older ones. At this point I am a bit frustrated and wonder if I will get the cooperation and support I need from this group. Later on I thank them for their "attention" and suggest that those who have time can come and meet with me on Saturday for the "meet and greet" session where I can discuss with them more details of my study.

Wednesday 30th January 2013

Venue: Linchwe Learning Centre

I visited Linchwe Centre to confirm with participants our meeting scheduled for Saturday, February 2nd. It was time for class and learners were just sitting outside in small groups chatting. One learner notices me and immediately warns others to go to class, which they all did. In class I found that more elderly learners were sitting in groups of 2 and 3 reading and revising together. The younger ones continue to chat even in my presence. Others were busy with their mobile phones with their study materials closed. The elderly ones kept reading and the other 2 were discussing a past exam paper.

Appendix 9 Letter of request to conduct study

27 th April 2012

The Executive Director
BOCODOL
Private Bag BO 187
Gaborone

<u>**RE: Permission to carry out a study**</u>

I am a lecturer at BOCODOL, currently pursuing a PhD Programme with the University of Pretoria. As a requirement to obtain the qualification I am expected to carry out a research. I therefore, kindly request you to allow me to carry out the study in some BOCODOL centres in the Kang Region, namely;

(i)   Gantsi Prison Study Centre

(ii)   Matsha Learning Centre, and

(iii)   Takatokwane Primary School, and in the Gaborone Region in the following study centres;

(i)   Linchwe Junior Secondary School

(ii)   Diphuduhudu Primary School

(iii)   Gaborone Senior Secondary School.

My working topic of research is: **Investigation of the Design, Development and Use of Open and Distance Learning Instructional Materials in a distance learning set up.**

The aim of the study is to find out if BOCODOL study materials contribute in any way to both high failure rate and high drop out rate of learners, and hope that the finding of this study will assist in developing better, more interactive study materials that will enhance both retention and learner success. The study will involve learners doing BGCSE English language and Development Studies. The information gathered during the study will be treated with utmost confidentiality and will be guided by international research ethics.
Thank you.

Mmabaledi Kefilwe Seeletso (Student Number 11263742)
cc. Director Learner Support Services
    Commissioner, Botswana Prisons Service

Appendix 10 Letter of approval from BOCODOL CEO

Botswana College of Distance and Open Learning

BOCODOL
Private Bag BO 187
Bontleng
Gaborone
BOTSWANA

Tel: +267 3181470
Fax: +267 3191089

Reference no: DOL/PF 10110 II (6)   **Date:** 30/04/2012

Ms Mmabaledi K. Seeletso
BOCODOL
Gaborone

Dear Madam

Permission to Carry out Research

Your letter dated 27th April 2012 refers.

Permission is granted to you to carry out research in the BOCODOL Centres you have identified. We hope you will share your findings with BOCODOL upon completion of the study.

We wish you luck in your undertaking.

Yours Sincerely

Dr Daniel R. Tau
Executive Director

Commonwealth of Learning Award of Excellence Winner – 2006

Regional Offices: -

Regional Manager	Regional Manager	Regional Manager	Regional Manager	Regional Manager
P/Bag BO 349	P/Bag 005	P/Bag F32	P/Bag 0394	P/Bag 006
Bontleng	Palapye	Francistown	Maun	Kang
Tel: 3930017	Tel: 4924024	Tel: 2418383	Tel: 6865621	Tel: 6517248
Fax: 3930018	Fax: 4900343	Fax: 2414586	Fax: 6800581	Fax: 6517248

b r i d g i n g   t h e   e d u c a t i o n   g a p

Appendix 11 Material developers' consent form

Addendum C2: Informed Consent Form for Writers

This is to state that I, …………………………………………….., a writer for BOCODOL study materials, have been informed and fully understand the nature and purpose of the research project entitled: Open and Distance Learning Materials and Accessibility: An Expose` on Botswana College of Distance and Open Learning (BOCODOL). I thus agree to participate in the study being conducted by Ms. Mmabaledi Seeletso, an employee of BOCODOL, and a PhD student at the University of Pretoria.

A. Purpose

I understand that this is not an experimental study and have been informed that the purpose of this study is to investigate the accessibility of the study materials that I wrote for use by BOCODOL learners, and the effectiveness of the study materials in terms of communication, learner motivation, retention and academic success.

B. Procedures

I will complete a questionnaire in which I will provide my biographical details as well as other information related to the study materials. I am aware that the researcher and her assistants will also visit the study centres regularly for some months between October 2012 and November 2013 to interview me. I will participate in the one-on-one interview and this will be done at my convenience, at the BOCODOL study centre in my area. I have been informed that the researcher will not interfere or intervene in my development of the materials in any way. Once a good rapport has been built with the researcher she will make audio recordings during the interview, which will only be used to assist in the analysis of her study. The researcher and her assistants will exit the centre should their presence at any time appear to disturb me or other material developers. I will be kept informed of the research process and will be debriefed after the conclusion of the project. I may also have access to a summary of the research findings.

C. Conditions of Participation

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences or penalty.

- I may do so by informing the researcher or her assistants verbally, in writing or by telephone.

- I am at liberty to contact the researchers at any time if I have any questions or concerns about the study.

- I understand that my participation in this study is CONFIDENTIAL.

- I understand that the findings of this study will be disseminated within an academic context, i.e journal publications, conferences or seminars.

- In addition to my general consent to take part in this study;

    o I DO agree to the occasional audio taping of instructional activities in or out of the classroom

    o I agree to take part in this study, but I do NOT agree to the occasional audio taping of instructional activities in or out of the classroom

I have carefully studied the above and understand this research project. I thus freely consent and voluntarily agree to participate in this study.

Name (please print):………………………………………………………………………….

Signature:……………………………………Date:…………………………………

E-mail:………………………………………………………………………………..

Researcher's name: Mmabaledi K. Seeletso

Signature:……………………………………Date:…………………………………

E-mail: mmaba.see@gmail.com

Supervisor's name: Dr. Rinelle Evans

Signature:……………………………………Date:…………………………………

E-mail:rinelle.evans@up.ac.za

NB: If you wish to discuss any aspect of this research project or have questions about your rights as a participant, please contact the researcher at 72106148, or you can also contact Dr. Evans at rinelle.evans@up.ac.za

Appendix 12 (C)   Learners' consent form

This is to state that I, …………………………………………….., a learner at BOCODOL, have been informed and fully understand the nature and purpose of the research project entitled: Accessibility of Open and Distance Learning Instructional Materials: Botswana College of Distance and Open Learning as a Case Study. I thus agree to participate in the study being conducted by Ms. Mmabaledi Seeletso, an employee of BOCODOL, and a PhD student at the University of Pretoria.

A. Purpose

I understand that this is not an experimental study and have been informed that the purpose of this study is to investigate the accessibility of BOCODOL study materials that we use to study, and the effectiveness of the study materials in terms of communication, learner motivation, retention and academic success.

B. Procedures

I will complete a questionnaire in which I will provide my biographical details and other information related to my study materials. I am aware that the researcher and her assistants will also visit the study centres regularly for some months between October 2012 and November 2013 to interview me. The interviews will take two forms – the focus group interview, where several of us will be interviewed at the same time, and a one-on-one interview, where I, the participant, will be interviewed alone by the researcher. I will participate in both interviews and this will be done at my convenience, at the study centre where I attend my face-to-face support sessions. I have been informed that the researcher will not interfere or intervene in my learning in any way. Once a good rapport has been built with the researcher, she will make both video and audio recordings of the interview. The footages will only be used for purposes of analysing her study. The researcher and her assistants will exit the centre should their presence at any time appear to disturb me or other learners. I will be kept informed of the research process and will be debriefed after the conclusion of the project. I may also have access to a summary of the research findings.

C. Conditions of Participation

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences or penalty.

- I may do so by informing the researcher or her assistants verbally, in writing or by telephone.

- I am at liberty to contact the researchers at any time if I have any questions or concerns about the study.

- I understand that my participation in this study is CONFIDENTIAL.

- I understand that the findings of this study will be disseminated within an academic context, i.e journal publications, conferences or seminars.

- In addition to my general consent to take part in this study;

  o I DO agree to the occasional video / audio taping of instructional activities in or out of the classroom

  o I agree to take part in this study, but I do NOT agree to the occasional video / audio taping of instructional activities in or out of the classroom

I have carefully studied the above and understand this research project. I thus freely consent and voluntarily agree to participate in this study.

Name (please print):…………………………………………………………………………….

Signature:…………………………………Date ……………………………………

E-mail:…………………………………………………………………………………………..

Researcher's name: Mmabaledi K. Seeletso

Signature:…………………………………Date…………………………………………

E-mail: mmaba.see@gmail.com

Supervisor's Name: Dr. Rinelle Evans

Signature:…………………………………Date…………………………………………

E-mail:rinelle.evans@up.ac.za

NB: If you wish to discuss any aspect of this research project or have questions about your rights as a participant, please contact the researcher at 72106148, or 3646104. You may alternatively contact Dr. R. Evans, University of Pretoria at: rinelle.evans@up.ac.za.

Appendix 13

(C1): Informed Consent Form for Tutors

This is to state that I, …………………………………………….., a tutor at BOCODOL, have been informed and fully understand the nature and purpose of the research project entitled: Accessibility of Open and Distance Learning Instructional Materials: Botswana College of Distance and Open Learning as a Case Study. I thus agree to participate in the study being conducted by Ms. Mmabaledi Seeletso, an employee of BOCODOL, and a PhD student at the University of Pretoria.

A. Purpose

I understand that this is not an experimental study and have been informed that the purpose of this study is to investigate the accessibility of the study materials that I use to tutor BOCODOL distance education learners, and the effectiveness of these study materials in terms of communication, learner motivation, retention and academic success.

B. Procedures

I will complete a questionnaire in which I will provide my biographical details as well as other information related to the study modules. I am aware that the researcher and her assistants will also visit the study centres regularly for some months between October 2012 and November 2013 to interview me. I will participate in the one-on-one interview and this will be done at my convenience, at the study centre where I tutor. I have been informed that the researcher will not interfere or intervene in my tutoring. Once a good rapport has been built with the researcher she will make audio recordings on regular events. This footage will only be used for purposes of analysis of her study. The researcher and her assistants will exit the centre should their presence at any time appear to disturb me or other tutors. I will be kept informed of the research process and will be debriefed after the conclusion of the project. I may also have access to a summary of the research findings.

C. Conditions of Participation

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences or penalty.

- I may do so by informing any of the researchers or their assistants verbally, in writing or by telephone.

- I am at liberty to contact the researchers at any time if I have any questions or concerns about the study.

- I understand that my participation in this study is CONFIDENTIAL.

- I understand that the findings of this study will be disseminated within an academic context, i.e journal publications, conferences or seminars.

- In addition to my general consent to take part in this study;

- o I DO agree to the occasional audio taping of instructional activities in or out of the classroom

- o I agree to take part in this study, but I do NOT agree to the occasional audio taping of instructional activities in or out of the classroom

I have carefully studied the above and understand this research project. I thus freely consent and voluntarily agree to participate in this study.

Name (please print):……………………………………………………………………….

Signature:………………………………………Date:…………………………………….

E-mail:………………………………………………………………………………………..

Researcher's name: Mmabaledi K. Seeletso

Signature:………………………………………Date:…………………………………

E-mail: mmaba.see@gmail.com

Supervisor's name: Dr. Rinelle Evans

Signature:………………………………………Date:…………………………………

E-mail: rinelle.evans@up.ac.za

NB: If you wish to discuss any aspect of this research or have questions about your rights as a participant, please contact the researcher at 72106148. You can also contact Dr. Evans at rinelle.evans@up.ac.za

Appendix 14   Ethical clearance approval

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

Faculty of Education
Ethics Committee
16th October 2012

Dear Ms Seeletso,

REFERENCE: HU 12/06/01

Your application was carefully considered by the Faculty of Education Ethics Committee and the final decision of the Ethics Committee is:

Your application is approved.

This letter serves as notification that you may continue with your fieldwork. Should any changes to the study occur after approval was given, it is your responsibility to notify the Ethics Committee immediately.

Please note that this is **not a clearance certificate**. Upon completion of your research you need to submit the following documentation to the Ethics Committee:

1. Integrated Declarations form that you adhered to conditions stipulated in this letter – Form D08

Please Note:
- **Any** amendments to this approved protocol needs to be submitted to the Ethics Committee for review prior to data collection. Non-compliance implies that approval will be null and void.
- Final data collection protocols and supporting evidence (e.g.: questionnaires, interview schedules, observation schedules) have to be submitted to the Ethics Committee before they are used for data collection.
- On receipt of the above-mentioned documents you will be issued a clearance certificate. Please quote the reference number **HU 12/06/01** in any communication with the Ethics Committee.

Best wishes,

Dr. Suzanne Bester
Acting Chair: Ethics Committee
Faculty of Education

Appendix 15   Ethical clearance certificate

Faculty of Education

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE	**CLEARANCE NUMBER :** HU 12/06/01
DEGREE AND PROJECT	PhD Instructional Materials: design and development as determiner of academic success for open and distance learners
INVESTIGATOR(S)	Mmabaledi Seeletso
DEPARTMENT	Humanities
DATE CONSIDERED	9 June 2015
DECISION OF THE COMMITTEE	APPROVED

Please note:

For Masters applications, ethical clearance is valid for 2 years

For PhD applications, ethical clearance is valid for 3 years.

CHAIRPERSON OF ETHICS COMMITTEE	Prof Liesel Ebersöhn
DATE	9 June 2015
CC	Jeannie Beukes Liesel Ebersöhn Prof R Evans

This ethical clearance certificate is issued subject to the following condition:

1. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.

Appendix 16   Interview protocol (questions)

You have given informed consent and your participation in this study is thus voluntary. I undertake to ensure that any information you provide will be treated with utmost confidentiality. To protect your privacy, no identifying details will be recorded in the final research report or any related documents. Numerical codes will be used to replace any personal identifiers when the results are collected. Thank you for being willing to participate in my research project and participating in this interview.

Interviewee number:

Title:

Date of Interview:

Study Centre:

Years at BOCODOL:

Interviewed by:

The interview will take between 20 and 25 minutes and will focus more on study materials that you contributed towards its development. I would like to know a few things regarding your contribution to the development of BOCODOL study materials.

1. Why did you decide to study with BOCODOL?
2. Are you happy about the enrolment exercise at BOCODOL?
3. Were you exposed to any form of training before or after enrolment?
4. Were you told of the differences between classroom learning and distance learning?
5. What are the advantages of studying through this mode?
6. How can you describe the content of your study module(s), regarding level of difficulty etc?
7. What are some of the challenges you experience regarding your study materials as a distance learner?
8. Do you think the content in the study materials adequately prepares you for examinations?
9. Are the topics in the study materials related and follow each other in a logical and coherent manner?
10. How do the study materials engage you?
11. What do your tutors do to "fill" the gap of your missing teacher??
12. To what extent do you think the study materials contribute to your academic success?
13. What change, if any, would you like to see in the study materials?
14. Would you recommend other people to study through the distance / open learning mode?

Once again. Thank you so much for your time.

Appendix 17   Interview transcriptions (sample)

Transcription 2

One-on-One Interview 1

The interview takes place at Matsha Community College, between the researcher and a learner I called Patrick.

Res: Okay we are now going to be doing on a one-on-one interviews. **Patrick:** Yah you are welcome.

Res: Ahmm and I must thank you for your time for having availed yourselves to come and help me with the interview. Right, now you are interview number?

Patrick: Err 1 I think so.

Res: Is that what is written on your code number?

Patrick: Yes KC

Res: KCLR1. So you are number one. Ok ahmm now tell me why did you decided to study with BOCODOL?

Patrick: Yah like I said yah I didn't have enough money to pay for private schools. Yah like I didn't have money to pay for private schools. All I could do, I had to work and make money then take myself back to school though it wasn't an easy way like it was really really tough but enroling with BOCODOL like I said, it came to me as a blessing because everything was cheap. The contents, the books which I could add some of the books which I could bought from the private schools and tuition fees and all these things, they could have cost me thousand but with a little less than thousand let me say less than five hundred, I managed to enrol and as little as less than thousand pula again I manage to register for my exams.

Res: Okay.

Patrick: Which I………………

Res: Now I think you have already gone even into the advantages because I was also going ask you the advantages of study with through this mode.

Patrick: Through this mode.

Res: Yes.

Patrick: Yah. Yes still you can ask me the question, let me just take it. Learning through BOCODOL is cool. Like one advantage you got your own time to do your own things at the same time learning. You have got that chance of exploring or searching for relevant mmmm let me say relevant data yah. Unlike at some school you are pressurized like you are given something like at conventional

schools you are given something like eight subjects and in a day you have to research for then all, you have to, you see it was hard but here is quiet easy.

Res: Mmmm is flexible.

Patrick: Yah is flexible indeed and here the other advantage is ahhhh, eish it has run through my mind.

Res: There are many.

Patrick: There are many.

Res: I appreciate that there are many! I can see from the look that they are quite many. Okay. So how can you describe the content of your English modules like regarding to the level of difficulty?

Patrick: Ahh I have got one way for that no they are not that difficult. What I can say they are marvelous.

Res: Can you explain that?

Patrick: Okay. One, when it comes to English language in BOCODOL all those things can be made that easy that you can even grasp without even breaking your nerves you know what am saying err they are easy everything have been have just been made easy for you. Like if we can take English is an easy language but when it comes to BOCODOL, they will make it simple for you to understand.

Res: Okay.

Patrick: Because as you can just see, most of people us young students or young people who are just who didn't made it to institution, the problem that we had is English it must be cheap to speak but hard to write.

Res: So it is easy to speak but hard to write?

Patrick: Yah.

Res: So what are you saying, that BCODOL makes it easy for you how does it made it easy?

Patrick: Like for example, they will be talking about certain things before that in their modules, the booklet itsself let me say the unit of English in it they have something like what can I say, what is this, syllabus, a simple syllabus is they are telling that this is what we are going to tackle this how we are going to tackle it this is the earn results. You see. By so doing you have a vision of a way where you are going. You can just go through it so easily, you know what am saying?

Res: Alright. Now I want to know some of the challenges that you as an individual experience while studying materials as a distance learner?

Patrick: Yah. As an individual what I have come across is one, irrelevancy and some contents err typing errors and even misplaced ahh let me say what I can say misplaced mmmm, what can I say, I don't have other word but let me say some

study materials are missing. For example in some certain units, there would be no questionnaires. In some there would be no additional units materials.

Res: So you mean some packs are incomplete.

Patrick: Some packs are incomplete yah.

Res: Okay.

Patrick: Yah and the other thing, those things are not deep, they are just shallow.

Res: What things?

Patrick: Study materials, those study materials are not deep, they are not going deep and they are not developing you that eager to go ahead. You know, they just suspend you.

Res: Okay.

Patrick: Yah. And the other thing that I came across is time, time management. They won't show you were to start which area you have to study more since I have said that they are that shallow. Yah yah there will be having those elaboration were to study how to do, it but they will not push you to the limit that you ended up going to research.

Res: Okay.

Patrick: You see.

Res: I think you have adequately answered it. Now do you think the content of your English modules adequately prepare you for
the examination?

Patrick: Yah definitely yes. Only if you got that eager again to learn. Yah they are good, they are good.

Res: Now you have mentioned earlier on that there are typing errors and they are shallow but at the same time you are saying they can prepare you for the exam.

Patrick: Yah.

Res: What do you do to make sure that you are really prepared?

Patrick: Yah for you to be really prepared you shouldn't rely only on the materials that have been prepared for you. You have to visit the libraries, you have to visit even your previous teacher if they are in your area or any way that you can if help because nowadays we have iPads, we got phones we can goggle and do all stuff.

Res: Mmmm.

Patrick: Yah if you. Okay if you take these things and combine them with your materials, I am telling you, you have a mastering weapon.

Res: Okay. Now how do your study materials engage you, how do they keep you studying?

Patrick: Yah they have got that coherence even though they are shallow but am telling you they are they are not drizzling around. They have got that link.

Res: But how do they engage do they have activities or things that can motivate you? Yah.

Res: That can make you do actual writing and study?

Patrick: Yah they have that thing. Let me say they are tutor by them self because they will give you an activity to do where else at the end they are some answers. And by so doing they create an interest. You will be rushing to find some good answers knowing that at the end of the day they are answers at the back, I will have to match mine yah.

Res: Okay. Now what change if any would you like to see in the study materials?

Patrick: Change? Yah.

Res: If you want.

Patrick: If I want?

Res: Change that you want to see in the study materials?

Patrick: Yah one. They have to go deep. They have to dig down and have more information. Two, they have to provide us with some video tapes of previous in subjects like mathematics. Ee. Three, they have to find a way I know is difficult but they have to find a way how we can attend some hours not only two hours or one hour because regarding a lesson like maths. Maths is a seven day subject that's why I was saying we need an extra time, we need more time they have to increase more time.

Res: Okay. And just one last question before we part. What would you recommend other people to study through ODL with all these challenges and you know.

Patrick: Yah you know there is nothing smooth to them. Life is a journey where you have to go up and downs but despite the challenges and all the likes, BOCODOL is a breakthrough. Yah, is only channel to a bright future which will not rob you or scam you. Ee that's not least but least I can say. Yah but I will recommend somebody to come and study in BOCODOL and nine out of ten I would not have misled him or her.

Res: Why would you think so?

Patrick: Why would I think so?

Res: That you would not have misled her or him?

Patrick: Because I have tried it myself. You know they say, speak of the devil only when you know him.

Res: Okay.

Res: Thank you very much for you time.

Patrick: Okay you are welcome.

Res: And I will probably need to touch base with you if I need any clarity on following our interview. Do you think you will make time for me to always come back to you?

Patrick: No you are always available.

Res: Thank you very much.

Patrick: I am always available for you. And yah anything you help,

Res: Willing to assist?

Patrick: I will be willing to assist.

Res: Thank you very much.

Patrick: You are welcome!!

Appendix 18   Observation Protocol for Video / Audio Recording

Title of Study: Accessibility of Open and Distance Learning Instructional Materials: Botswana College of Distance and Open Learning as a Case Study.

Observer:……

Research Assistant (if app.):…………………………………………………………………………………

Purpose of the exercise:………………………………………………………………………………………

Resources:……

Research site:……………………………………………………………………………………………………

Date of visit:………………………………………………………………………………………………….

Time of visit:……………………………………………………………………………………………………

Target group:……………………………………………………………………………………………………

Number of learners:……………………………………………………………………………………………

Video / audio recording details:……………………………………………………………………………..

Duration of session:……………………………………………………………………………………………

Observer:……

Issues for noting:

(i)   Duration of pause between prompt and response

(ii)   Type of responses

(iii)   Distribution of responses (ie) is there one or two learners providing answers each time a question is asked?

(iv)   What comes out and salient and interesting during the interview?

(v)   Do answers provided by participants answer questions raised by the researcher?

Defining learners' behaviours

Description of how learners behave during interviews recorded interviews	Possible interpretation of observed behaviours

Appendix 19   **Declaration Form (Research Assistant)**

DECLARATION BY RESEARCH ASSISTANT

Name:…………………………………………………………………………

Role in the study:……………………………………………………………

I, the above mentioned, pledges the following:

    (a) I am aware of, and will comply with upholding the participants' confidentiality and privacy associated with this research.

    (b) I declare that under no circumstances would I disclose the participants' details nor information contained in this study to a third party.

    (c) I fully understand the repercussions of unlawful disclosure of both the participants' details and the content of this study; be it wholly or in part.

    (d) I fully understand that breach of a, b and c above may result in action taken against myself by either the researcher, participants or both for breach or research ethics.

Signature of Assistant Researcher:…………………… **Date**:……………………

Appendix 20   **Facilities enabling learning**

Photo A – Library services facilitate learning

**Photo B** – Secondary Schools conducive for learning
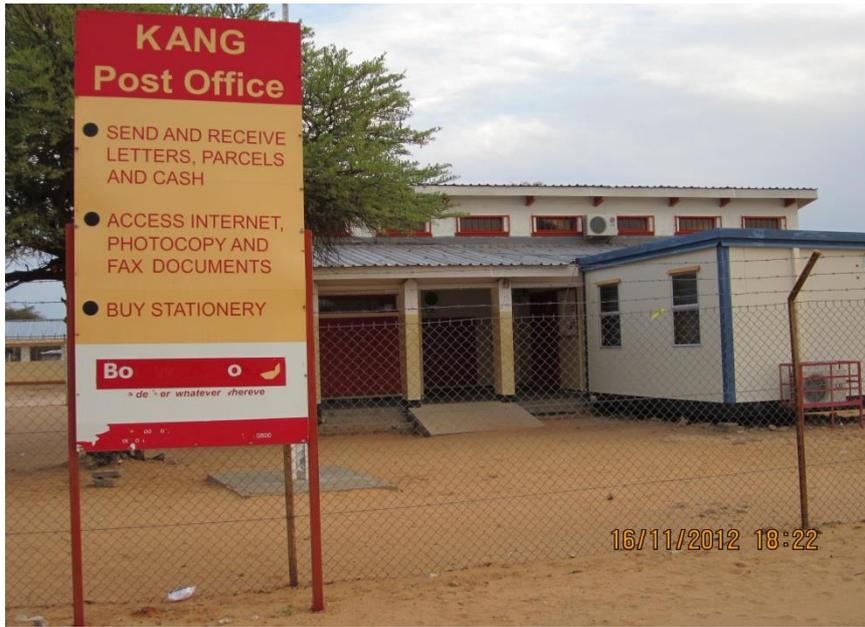
Photo C: Postal services promote communication which ca facilitate learning

Appendix 21   Examples of barriers to effective learning

Photo A – Disadvantaged background

Photo B: Disadvantaged background that cannot promote learning

Photo C – Poor amenities that cannot promote learning

Photo D – Studying with help of car lights

SHARON (SHEYNE) R BALL TTD (JCE)

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27 June 2015

CERTIFICATE OF EDITING

To whom it may concern

This certifies that I have edited the PhD thesis, INSTRUCTIONAL MATERIALS: DESIGN AND DEVELOPMENT AS DETERMINER OF ACADEMIC SUCCESS FOR OPEN AND DISTANCE LEARNERS, by Mmabaledi Seeletso, prior to it being finalised and submitted to the Faculty of Education, University of Pretoria, South Africa, in June 2015.

Disclaimers

1.   I focused on language issues, including grammar, tenses, subject-verb agreement, punctuation, and consistency with regard to UK spelling.

2.   The word order was improved where necessary to enhance the logical flow of the story line. I also made suggestions for the improvement of the structure and numbering of sections, and consistency with regard to heading styles.

3.   A complete edited copy was provided to the author. Final decisions rest with the student as to which suggestions to implement.

Sheyne R Ball
Language editor