EXPLORING MEDIA BlENDS FOR CONSTRUCTIVIST LEARNING IN OPEN AND
DISTANCE AND E-I.FARNING (ODeL) ENVIRONMENTS

By

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I declare that EXPLORING MEDIA BLENDS FOR CONSTRUCTIVIST LEARNING IN OPEN AND DISTANCE AND E-LEARNING (ODeL) ENVIRONMENTS is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

SIGNATURE

DATE
EXPLORING MEDIA BLENDS FOR CONSTRUCTIVIST LEARNING IN OPEN AND DISTANCE AND E-LEARNING (ODEL) ENVIRONMENTS

KEY TERMS DESCRIBING THE TOPIC OF THE THESIS: online media blends; constructivism; observational learning; online learning
ABSTRACT

EXPLORING MEDIA BLENDS FOR CONSTRUCTIVIST LEARNING IN OPEN AND DISTANCE AND E-LEARNING (ODEL) ENVIRONMENTS

There is a paramount need for online university education to effectively contribute in the development of students’ ability to construct and create new knowledge. Online learning should thus go beyond the production of knowledge for knowledge’s sake, but should result in relevant and meaningful learning on the part of the online learner. In addition, online learning ought to result in the application of knowledge to practice. While gains made by constructivism and observational learning are well documented, research addressing online media blends that best encourage constructivist and observational learning in open and distance and e-learning (ODEL) contexts is limited. In addition, guidelines that can be used by online learning facilitators and policy makers regarding media for constructivist and observational learning were lacking when this research was conducted. The research was deemed significant in contributing to the development of an online learning framework that could be used to guide policy formulation and practice in the area of online course implementation in ODel institutions.

Using an explorative qualitative approach, this study explored online media blends for constructivist and observational learning. The study comprised three phases. The first phase was a meta-ethnography study whose objective was to synthesise previous research theses in order to gain an understanding of lecturers’ and students’ experiences of online media, constructivism and observational learning. The second phase consisted of a phenomenological study conducted at the University of South Africa, to explore lecturers’ experiences of online media in the facilitation of constructivism and observational learning. The final phase of the research was the development of a framework based on constructivism and observational learning to guide online teaching and learning.

The findings of this research study revealed that lecturers did not use media blends to a large extent in their interaction with students. The study indicated that some cognitive processes need
to be exercised on the part of the facilitators when online learning is offered. It is concluded that during the curriculum planning phase, lecturers should decide on methods and media to arouse the students' attention during online courses. This also implies a more reasonable lecturer-student ratio because large numbers of students per lecturer is not feasible in online learning.
i dedicate this thesis to the Almighty, and to my family, Eva, Tina and Peter, with whom I share unconditional love and who always remind me, in the words of Vincent van Gogh, “There is peace even in the storm”.

I further dedicate this work to my beloved son Mark, my angel, my hero, my rock. You are constantly in my heart, my dreams and my prayers.
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“We want students to share our enthusiasm for our academic discipline and find our courses so compelling that they willingly, in fact enthusiastically, devote their hearts and minds to the learning process.”

(Barkley in Conrad & Donaldson 2012:14)
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LIST OF ACRONYMS AND ABBREVIATIONS

ADDIE: Analysis, design, development, implementation, evaluation

BLOGS: Weblogs

DE: Distance Education

CD: Compact disc

CLEM: Constructivist Learning Environment Model

CORE: China Open Resource for Education

DVD: Digital versatile disc (formerly: digital video disc)

ICT: Information communication technology

LMS: Learning management system

MIT: Massachusetts Institute of Technology

MOOC: Massive open online course

ODL: Open and distance learning

ODEL: Open distance and e-learning

OER: Open education resources

TESSA: Teacher Education in Sub-Saharan Africa

Unisa: University of South Africa

WWW: World Wide Web

ZPD: Zone of proximal development
CHAPTER 1
Purpose, aim and rationale for the study

1.1 Introduction and background

The University of South Africa (Unisa) is the oldest open and distance learning institution in the world. It was established in 1873 to serve as an examining centre for the for Oxford and Cambridge Universities (Unisa Sa:4). As an institution, Unisa has evolved over the years in terms of its identity. Unisa currently identifies itself through its mission as

A comprehensive open, distance learning institution that provides excellent scholarship and research, provides quality tuition and fosters active community engagement. Unisa is guided by the principles of lifelong learning, student-centredness, innovation and creativity. Unisa’s efforts contribute to the knowledge and information society, advance development, nurture a critical citizenry and ensure global sustainability (Unisa 2011:6).

In this regard, Unisa has invested in technological initiatives in order to facilitate relevant learning and support students in the 21\textsuperscript{st} century (Unisa 2011:38). The University has thus undertaken initiatives to facilitate not only open and distance learning (ODL), but open distance and e-learning (ODeL). Unisa’s identity as an ODeL institution is still in its infancy (Unisa 2013a) and the University currently operates as a distance education provider as defined by Holmberg (2005:7). The researcher used ODeL, ODL and distance education (DE) as the key concepts and approaches in her research. As the researcher sourced her data for the second phase of the research from Unisa, she used the terms online learning within the context of Unisa to denote OdeL throughout this thesis.
DE has impacted on teaching and learning in unprecedented ways. New technologies, learning paradigms and learning theories have disrupted the age-old hierarchical educational structures. Conole and Dyke in (Conole, De Laat, Dillan & Darby 2008:1) stated the following:

There is a growing belief that we are entering a new phase in the development of technologies, instantiated in what is being referred to as “Web 2.0”. This change reflects the shift away from information and content towards the communicative affordances of technologies.

ODL emerged from the field of DE, which is still practised in educational institutions around the world. DE is believed to have started informally during biblical times, with the more organised form beginning in 1728 with correspondence courses (Holmberg 2005:13; Osborne 2012:2). One of the most profound changes in the not too distant past was spawned by the freeing, in the late 1960s, of DE from the constraints of access to education, time and place with the aid of innovations such as open registration and distributed team teaching. In addition, there was a move to self-learning, student-centricity in student services and mediated didactic communication (Koul 2006:2). These developments led to some DE institutions redefining themselves as ODL institutions.

ODL is defined by a number of characteristics which make it unique to conventional education. These characteristics, according to the Commonwealth of Learning (2000:2), include the separation of the lecturer from the students in time and/or place, institutional accreditation, the use of mixed media courseware, two-way communication, the possibility of face-to-face meetings or tutorials and the use of industrialised processes for the purposes of course development. The bridging of the variable of dialogue, which is a component of Moore’s (2005:23) theory of transactional distance, is facilitated through the integration of a variety of communications media. These media may be print based, audio-visual, computer based, online based or may consist of a combination of various technological and human resources.

In the realm of online learning, which, in some instances, is a subset of ODL, a variety of computer applications are available to facilitate learning. These applications include wikis, blogs, discussion boards, as well as new generation collaboration and learning management
platforms such as Moodle and Sakai (see figures 1.1 and 1.2). The new platforms open up portals through which new knowledge can be collaboratively created. They may allow for self-election of learning opportunities by both lecturers and students, and for conversations about teaching, learning and knowledge creation.

In the context of Unisa, the learning management platform known as myUnisa, which is powered by Sakai, has a number of online applications for use by academic staff and students for administrative and pedagogical purposes. For purposes of this research, the researcher explored the use of online applications available on myUnisa learning management platform for constructivist and observation learning. The three applications that were the focus of this research are wikis, blogs and discussion boards.

Wikis are websites that allow visitors to create and co-create content. They allow for growth over periods of time and are a source of up-to-date information. Wikis also allow for the sharing and editing of work between users and may encourage dialogue in the solving of problems.

![Figure 1.1: Asynchronous collaboration using a wiki](image)

Blogs are online applications that allow lecturers and students to push their own thinking and have their thinking pushed by others. By writing blogs, lecturers and students develop their public articulation skills by allowing their voices to be heard. Users respond to comments made on their blogs, link up with other bloggers and create new ideas, review resources and engage in debate (Ferriter 2009:37).

Discussion boards, also referred to as discussion forums, allow for the posting of messages for the purpose of conversing. Messages on discussion boards, unlike chat rooms, are archived for a period of time. These hierarchically organised discussions appear in the form of “threads”. In educational settings, discussion boards allow lecturers or course administrators to keep the discussion clean, focused and free of spam.

Figure 1.2: A discussion board on a learning management platform

Source: Accessed from Unisa (2012a) https://my.unisa.ac.za/portal/site/iodlphd/page/2fcf054a-0e0a-49be-b4a7-6bc7abaf73e9, 20 July 2012
The basic functions of a learning management system (LMS) include the centralisation and automation of administration, the offering of self-service and self-guided services and the rapidly assembly and delivery of courses. In addition, these systems allow for the consolidation of training initiatives on a scalable web-based platform and the personalisation and possible reuse of educational content (Monarch Media 2010:3) (see figure 1.3). The combinations of the uses of online applications are, for the purposes of this research, referred to as online media blends. The applications allow for various pedagogical approaches to be applied either synchronously or asynchronously in ODL environments. A need existed for empirical findings on blends of using online applications that encourage relevant learning in higher education ODL environments. The need for best practice guidelines in the field of online learning in the context of Unisa is similarly evident. For the purpose of this research, the researcher explored the use of wikis, blogs and discussion boards for constructivism and observational learning.

Figure 1.3: A homepage on myUnisa learning management platform

With multimedia developments and the internet in the 1990s, higher education institutions have adopted enterprise-wide and internet-based LMS. These systems integrate a range of pedagogical and course administration tools that create virtual learning environments (Coates, James & Baldwin 2005:19). In ODL environments, LMS are beneficial in the facilitation of flexible course delivery, the identification and use of resources, collaborative work and student management and support (Ryan, Scott, Freeman & Patel 2000 in Coates et al 2005:23).

Developments in the field of ODL have contributed to changes in the way learning is facilitated. These changes have been driven in part by technological advancement and changes in learning pedagogies as a result of research into human learning, resulting in new learning models and theories (Siemens & Tittenberger 2009). These changes have led to the classification of ODL into generations based on the key characteristic features of education provision at the time. The generations or eras developed distinct pedagogies, technologies, learning and assessment criteria. Some allude to the existence of three generations of distance education based on educational, social and psychological development (Anderson & Dron 2011:80–97). Other authors view the development of distance education as evolving over four generations based on the technologies used to facilitate learning (Sherron & Boettcher 1997:4–13). Heydenrych and Prinsloo (2010:18–19) classifies the development of distance education into five generations based on pedagogy and interaction, medium, production, storage and delivery. For the purposes of this research, the researcher elected to use the five generations owing to the comprehensive typology of characteristics. It should be noted that although the generations are presented by authors as sequential, these generations overlap and are non-sequential in some regards.

1.1.1 Generations of distance education

ODL, whose roots lie in distance education, may be classified into five generations based on the technologies employed and pedagogical grounding. The first generation of distance education largely refers to the print-based correspondence study. This form of education was characterised by lecturer-centred learning approaches. The second generation saw the integration of broadcast television, radio, audio and video cassettes as well as increased student support in distance
education programmes. The third generation marked a move towards hypertext and saw the introduction of the teleconference to the field of distance education. The subsequent fourth generation heralded the adoption of flexible learning and the use of computer-mediated communication with the accessibility of courses on the internet. The fifth generation is marked by online interactive multi-media, as well as internet-based access to online resources (Lou, Bernard & Abrami 2006:141-176). The fourth and fifth generations are characterised by social constructivist approaches to learning, while the fifth generation is, in addition, characterised by connectivism and enactivism.

The need for ODL institutions to work towards the fifth generation of distance education is evidenced by the interconnectivity of the various spheres of human existence as well as the students that ODL institutions cater to. Students of ODeL institutions are digitally competent (Prensky 2001:1), they require instantaneous access to information and are not only consumers, but producers of knowledge as well. This distinguishes them from the conventional students on the basis of the type of technology they use and their learning preferences (Bennett, Maton & Kervin 2008:775-786). Similarly, Frand in Coates et al (2005:24), contends that contemporary students have an “information-age mindset”, and that technological skills and expectations are tacit and profound among this cohort.

Online learning provides applications for both synchronous and asynchronous communication. Synchronous applications include webcasts, chat rooms and video-conferencing which approximate face-to-face teaching strategies. Asynchronous applications such as email and discussion boards allow for contributors to participate at times that are convenient for them (US Department of Education 2009:1). The use of these applications can be blended to achieve the desired pedagogical outcomes. These applications allow for blending of teaching and learning strategies. For the purposes of this research, these diverse applications were broadly referred to as media blends in online learning environments.

ODL formed an integral part of this research and as such, the researcher began this chapter by introducing ODL and its relationship with online learning. The following sections of this chapter, focus on the context of the research, followed by an introduction to the theoretical grounding for
the research. The problem that the research sought to address is followed by the research question and objectives emanating from the research question. The significance of the research and definition of the terms germane to the research are presented, as are the limitations and delimitations. The chapter concludes with the layout of the rest of the chapters.

1.1.2 Context of the research

The reasons for stating the context of the research is to identify the sets of conditions in which the problem and focus of the research occur and to which the participants respond (Corbin & Strauss 2008:88). In this regard, the research focused on online learning in a higher education environment as it occurred at the University of South Africa (Unisa). Unisa is a comprehensive African higher education ODL mega-institution serving more than 300 000 students. The challenges faced by the institution are regional and in some cases international. There is a deficit in higher education provision on the continent, caused in part by historical dispensations and the relative emphasis placed on primary education by funding bodies and governments (Mama 2003:103). Any attempt to address the backlogs and deficits would require investment in technology, infrastructure and people. At the same time, it is necessary to ensure that distance education is quality assured, relevant and flexible, and uses innovative modes of delivery and modern technology (Makhanya 2011:6). In terms of the technology and pedagogy employed for the facilitation of learning, Unisa has been on a technological journey, which the researcher will examine to the present day.

Unisa has been in existence in various forms since 1873, when it served as an examining centre for Oxford and Cambridge Universities (Unisa Sa:4). In terms of technology utilisation for the facilitation of teaching and learning, audio-visual technology in the form of cassette tapes was used at Unisa as part of teaching strategy in the 1960s and radio broadcasts began in the late 1980s (Steyn in Harris 1994). The use of radio broadcasts at Unisa was initiated in 1988 and involved academics Paul Steyn and Louis van Niekerk from the Department of Didactics, and David Adey, with the support of the Vice-Principal (Research). These initial steps led to Radio Unisa being professionally coordinated by the Bureau for University Teaching (Adey 1992:11–24). Up until this point, education at Unisa had been facilitated by the printed word and audio
cassettes. Computer-based education at the University was initially used in the Department of Computer Science and it was restricted to students registered for the Computer Concepts programme. The computerised package, which was set up to maintain question banks of short questions, was designed as self-testing material for students. This system, which had been in operation since the beginning of 1991, was designed by the Department of Computer Science and Information Systems. At the time, electronic mail (email) had just emerged as a means of communication between the lecturer and the students (Alexander & Pistorius 1992:58–64). At this point in time, although there were a number of students with access to computers in their homes (Liebenberg, Chetty & Prinsloo 2012:257) and/or offices, there was a lack of realisation about the gains to be made from using these computers for learning, training, experimenting and communicating. Technologies such as vodcasts and mobile devices in conjunction with more established technologies such as CDs and DVDs were making their mark at the University (Unisa [sa]:8–20). However, myUnisa platform, which is an integrated LMS, was launched in 2005 in addition to open and distance learning activities (Unisa 2013b:6). To date, myUnisa is the mode of online learning provision at the University.

This study was deemed useful in the light of the developments in the use of online technology at Unisa. The research, which was conducted at Unisa, was grounded in theoretical frameworks that took into account the nature of learning and online technologies. Unisa comprises six colleges of varying sizes. For the purposes of this research, the researcher sourced her data for the second phase of the research from a sample drawn from various Unisa colleges.

1.2 Theoretical framework

In this study, the researcher decided to use a theoretical framework in order to build on previously defined frameworks. While allowing the framework to give direction and insight to the research, she kept an open mind to new emergent ideas and concepts (Corbin & Strauss 2008:40). The theoretical framework that guided the research is addressed in detail in chapter 2 of this thesis, while the key theories and framework that were used are presented below.
1.2.1 Constructivism

The theory from which this research was derived in part from is constructivism, as defined by Baviskar, Hartle and Whitney (2009:543–544), which entails four key activities, namely eliciting prior knowledge, creating cognitive dissonance, applying knowledge with feedback and reflecting on learning. Unisa has adopted an Open Distance Learning policy which defines learning in constructivist terms as the active process of construction of knowledge (Unisa 2008:1). As data for this research was sourced in part from Unisa, constructivism formed part of the theoretical grounding for the study.

1.2.2 Observational learning

In addition to constructivism as defined by Baviskar et al (2009:543–544), the research used observational learning as a theoretical framework. Observational learning, which emanates from social cognitive theory, is highly student centred and is based on the premise that people are self-organising, proactive, self-reflecting and self-regulating. Bandura (2001:266), in describing social cognitive theory, does not view people as reactive organisms shaped and shepherded by environmental events or inner forces. For the purposes of this research, Bandura’s (2001:273) observational learning was used as a guiding theoretical framework, which will be described in the next chapter. Observational learning is defined as learning that occurs through observation (Craig, Chi & VanLehn 2009:779). Unisa views learning as the development of skills through the use of people and electronic media (Unisa 2008:1). Observational learning was thus seen as an apt theory to further ground this study.

1.3 The problem statement

There has been a proliferation of online learning courses offered by universities, and many other educational providers are in the process of implementing such courses. This is a result of the creation of online platforms that establish new learning environments offering multidimensional
learning possibilities (Chang & Tung 2008:71–83; Tuquero 2011:157–179). There is a paramount need for online university education aimed at developing students’ ability to construct and create new knowledge in order to meet the demands of a knowledge society. In addition, higher education that develops 21st-century skills in students has become increasingly necessary.

Gains made by constructivist methods in achieving learning outcomes in general are well documented (Akar & Yildirim 2009:401–415; Neo & Neo 2009:254–266; Schmidt, Van der Molen, Te Winkel & Wijnen 2009:227–249). Similarly, research has been conducted on the benefits of constructivist learning in online learning environments (Bower 2011:27–42; Lowrey & Kim 2009:547–566). However, there is a paucity of research that addresses online learning applications that best encourage constructivist and observational learning.

In view of the move towards online learning by educational institutions, the problem is the lack of evidence regarding which online applications best facilitate constructivist and observational learning in ODL environments. Similarly, there are no best practice guidelines available for the stimulation of constructivist and observational learning through the use of online applications.

1.4 Purpose of the research

The purpose of this research was to explore constructivism and observational learning in an online learning environment at a mega ODL university, which could be used to inform policy development regarding the use of online media applications for online learning practice in higher education institutions.

1.5 Research question

What practices are employed in the facilitation of media enabled online learning to facilitate constructivism and observational learning in online learning environments?
1.6 Objectives of the research

The following objectives emanated from the research question:

(1) To synthesise previous research theses in order to gain an understanding of lecturers’
and students’ experiences of online media, constructivism and observational learning

(2) To explore lecturers’ experiences of online media in the facilitation of constructivism
and observational learning

(3) To develop a framework based on constructivism and observational learning to guide
online teaching and learning

1.7 Significance of the research

The research contributes to the development of an online learning framework that could be used
to guide policy formulation and practice in the area of online course implementation in ODeL
institutions. Despite the potential benefits for learning offered by LMS, the use of these
platforms by lecturers and students for pedagogical purposes is limited (Chen 2011:42). One of
the reasons for this is the lack of competence development and support in how to use the LMS
for pedagogical purposes, on the part of lecturers and students (Christie & Garrote Jurado
2009:277). This research contributes to online learning practice and policy development for
educational institutions involved in the provision of online learning courses through the
development of best practice guidelines for constructivist and observational learning in online
learning.

It is becoming increasingly important for online facilitators to be able to stimulate constructivist
and observational learning in ODeL teaching and learning to increase the possibility of fostering
the development of relevant skills in students at ODeL institutions.
1.8 Definition of terms

The following terms were germane to the research and the context of their usage for the purposes of this research:

1.8.1 Distance learning

Distance learning is learning that occurs in principle when the students are separated from their instructors with little or no face-to-face interaction. In this case, one or more media are used for the interaction between students and their instructors and for communicating subject matter. The learning is based on noncontiguous communication between the student and the supporting educational institution (Holmberg 2005:7).

1.8.2 Open and distance Learning

Open and distance learning is characterised by the removal of the exclusionary triangle of access, cost and quality, allowing broad access to quality education at an affordable price (Pityana in Makhanya 2011:5). Secondly, ODL in terms of this research referred to the shift of autonomy and responsibility of the learning experience to the students (Open University 2011) facilitated by means of online learning.

1.8.3 Open Distance and e-Learning

The term Open Distance and e-Learning as used in this thesis denotes an institutions’ transactional environment with students is fully digitised and thus underpinned by robust, effective and integrated ICT applications (Unisa 2013a:5).
1.8.4 Media blends

Blended learning has traditionally referred to the combining of face-to-face instruction with technology-mediated instruction (Bonk & Graham in So & Bonk 2010:189). However, the term “blended learning” more recently encapsulates learning technologies coupled with pedagogical considerations (Graham 2006). Drawing from this definition of blended learning, media blends, for the purposes of this research, refer to the technological applications that facilitate blended learning. These include wikis, blogs and discussion boards.

1.8.5 Constructivism

Definitions of constructivism consist of the key element of learning occurring by the internal process of constructing knowledge. This construction may occur through active participation in a discovery-oriented process in a meaningful context (Overbay, Patterson, Vasu & Grable 2010:103). For this research, this broad definition of constructivism was employed.

1.8.6 Observational learning

Observational learning is based on Bandura’s (2001:265–299) social cognitive theory. In observational learning, a single model can transmit new ways of thinking and behaving simultaneously to countless people in dispersed locales. Human nature is thus shaped by direct observable experience through various processes which are intrinsically human, symbolising capabilities, self-regulatory capabilities, self-reflective capabilities and vicarious capabilities.

1.8.7 Research synthesis

Research synthesis is the conjunction of a particular set of literature review characteristics. The primary focus of a research synthesis is to integrate empirical research for the purpose of
creating generalisations as well as seeking the limits of generalisations (Cooper, Hedges & Valentine 2009:6)

1.8.8 Meta-ethnography

The synthesis of research theses was part of the method employed in this research. Meta-ethnography is a qualitative method that is used to synthesise understanding from qualitative accounts. It allows interpretivists to derive understanding from multiple cases, accounts, narratives or studies (Noblit & Hare 1988:10–12).

1.9 Limitations of the research

During the sourcing of data for the meta-ethnographic phase of the research, the researcher was unable to source data from various contexts. Because context is important in primary qualitative research and lends credibility and weight to primary studies, the intention of a synthesis is to retain the rich context of the data (Atkins, Lewin, Smith, Engel, Fretheim & Volmink 2008:21).

The limitation of this research in this regard, was the researcher’s inability to systematically explore the influence of contextual factors in the research studies. Although this has been indicated as a limitation of the research, it is noted as a methodological limitation in meta-ethnographic works in general (Estabrooks et al in Atkins et al 2008:7). The research occurred in selected departments at Unisa where online teaching and learning was being practised. The sample for the research was limited to those lecturers who had been involved in online learning activities.

1.10 Delimitations of the research

The delimitations used in this study were determined by a desire to gain an understanding of Unisa lecturers’ experiences of the use of media blends in online learning. In order to gain an understanding of the experiences of lecturers using online learning and media blends, the
researcher sought participants for the study who were engaged in online learning in an ODL environment. The use of lecturers in ODL institutions excluded lecturing staff in other higher educational institutions in South Africa because Unisa is the only dedicated ODL higher education institution in South Africa.

1.11 Chapter layout

Online learning as a form of ODL is indicative of the technological era and global knowledge environment that characterises the 21st century. This chapter provided an overall orientation to the research, and looked at the advent of ODL and the various learning approaches. Introductory background to the research was provided with reference to ODL, and online learning was presented in order to illustrate the development of ODL from its distance education roots in the form of the generations of distance learning. The problem statement of the research was presented as was the context in which the research was conducted. The purpose of the research and the research question, objectives and significance were also explained. The significance of the research was addressed, followed by a definition of the key terms relating to the research. The terms were social media blends and constructivism. The limitations and delimitations of the research were also highlighted. The layout of the rest of the thesis is as follows:

Chapter 2: Literature review and conceptual framework

Chapter 2 provides details of the key concepts relating to this research and the context in which the research was conducted. Prior research in the focus area of online media blends for constructivist and observational learning is addressed in this chapter with a view to placing this particular study in the broader knowledge field. Chapter 2 also addresses the conceptual framework in depth.

The literature review identifies what was accomplished previously, allowing for consolidation, building on previous work, summation, avoiding duplication and identifying omissions or gaps. The chapter explains the framework of constructivism, and presents a detailed explanation of
Bandura’s (2001:273) functions governing observational learning, which serves as the basis for the research.

Chapter 3: Research design and methodology

Chapter 3 describes the meta-ethnographic methodology, which comprises the first phase of the research and addresses the first objective of the research. This is followed by an explanation of the phenomenological research method, which is the second phase on which this research was based.

Chapter 4: Lecturers’ and students’ experiences of online media, constructivism and observational learning: a meta-ethnographic study

This chapter contains a detailed explanation of the meta-ethnographic study conducted to explore students’ experiences of online media blends, constructivism and observational learning. In this chapter, the findings of the meta-ethnographic study, which was the first objective of the research, are presented.

Chapter 5: Results of the phenomenological exploration of the lecturers’ experiences of online media in the facilitation of constructivism and observational learning

The research findings of the second phase and second objective of the research, which comprised a phenomenological study, are presented in this chapter. In addition, the third objective, namely the development of a framework based on the findings of the first two phases of the study, is explained in this chapter.

Chapter 6: Discussion, conclusions, recommendations and conclusion

A discussion of the findings and recommendations based on the findings of the study are presented. This is followed by conclusions drawn from the findings of the study.
CHAPTER 2
LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

According to Grant and Booth (2009:97), the purpose of a literature review is to identify what has been accomplished previously, allowing for consolidation, building on previous work, summation, avoiding duplication and identifying omissions or gaps. The researcher therefore decided to subdivide this chapter into two parts. The first provides a literature review. The literature review starts with an introduction, whose aim is to give an overview of what the review covered and the literature relating to the focus of the research. The second part of this chapter focuses on the conceptual framework, which guided the research. In the following section, information on the approach used in carrying out the literature review is presented.

2.1.1 Approach to the literature review

Since ODL formed the context of this research, the literature review starts by introducing the distinguishing features of ODL as a preface to the broad context of the research. This is followed by a definition of ODL. Owing to the fact that ODeL falls within the field of education, it is placed within the educational field and addresses its evolution in terms of research focus. The development of ODL is traced from its correspondence education roots in distance education with special reference to the generations of distance education. The generations of distance education are discussed on the basis of the societal, technological and pedagogical changes that have impacted on ODL over the years. These changes have helped define the generations. During the researcher’s reflection on the pedagogical changes that occurred in the field of ODeL, constructivism emerged as one of the major pedagogical changes in the latter generations of distance learning.
With the various applications and tools available online, online learning is explained in terms of blended learning and its potential affordances in the field of ODL and the pedagogical benefits it may contribute to teaching and learning. In the literature review section of this chapter, prior research on online learning media blends for constructivism and observational learning is analysed in order to place the current study in the broader knowledge base.

Owing to the fact that constructivist learning formed part of the conceptual framework of this research, it was deemed necessary to discuss cognitive and social constructivism. The current relevance of the constructivist pedagogy led the researcher to highlight its development and the various learning theories emanating from constructivism. Not only are the theories highlighted, but the role technological media play in constructivist learning is also addressed. Online technological media were revealed as the media for current generations of distance education and one of the foci of this study was online learning. Social cognitive theory is addressed in the latter part of this chapter and the functions of observational learning emanating from social cognitive theory explained.

### 2.2 Open and distance Learning

The searches conducted for a definitive definition of open and distance learning revealed two main attributes of ODL, which is also referred to as flexible learning by some authors (Shurville 2008:74-84). The first attribute is that of accessibility. This attribute stems in part from the history of formal education, which in many contexts, was a privilege for an elite few (Reay, David & Ball 2005:1-3). Because ODeL evolved from the concepts of ODL, distance learning and distance education, the linking of the word ”open” to distance learning was a means of denoting the overcoming of constraints to education (Open University 2011:1). ODL has sought to address the learning needs of primarily adult students who, for reasons such as geographical remoteness, time and financial constraints, have been excluded in terms of access by conventional education providers. ODL thus implies the evasion of avoidable restrictions such as entry without prescribed requirements (Holmberg 2005:10). Regarding the declaration of human rights, the exclusion of people from education was seen as a contravention of their human rights
(World Education Report 2000:54). In the ODL context, openness is epitomised by the breaking, through the use of technology and its evolution, of the exclusionary triangle of access, cost and quality, allowing broad access to quality education at an affordable price (Pityana in Makhanya 2011:5). Other traits of ODL are the shift of autonomy and responsibility of learning from the lecturers to the students, and freedom of the learning transactions from the constraints of time and place that this form of education offers.

Over the years, ODeL has experienced steady growth in the number of institutions offering courses and the number of student enrolments. This growth may be attributed in part to the recognition given to distance education over the last three decades of the 20th century (Holmberg 2005: 21). The incipient form of ODL, as it is known today, was correspondence courses which took root in formal education in the 1700s and 1800s. The literature search in the current study reveals that the first explicit representation of distance education courses took the form of notices and advertisements with little learning content placed in print media. Holmberg (2005:13-16) presents a classic example of this as an entry placed by a Mr Caleb Phillips in 1728 in the Boston Gazette of 20 March 1728, which connotes the possibility of tutoring by correspondence. Sir Isaac Pitman in the 1840s sent Biblical shorthand texts written on postcards to and received work from his far-flung students, and he is therefore considered the original founder of distance education (Holmberg 2005:13-16). From these beginnings, ODL has grown internationally as an accepted form of lifelong learning. Within a similar context, Unisa, the world’s oldest distance education provider, evolved from an examination centre to a full-fledged correspondence university in 1959. The year 2005 saw Unisa launch a fully integrated LMS, myUnisa, as well as open distance learning activities (Unisa 2013b:6-7). The United Kingdom Open University is widely regarded as the catalyst that led to the recognition and growth of ODL in its present form (Granger 1990:44).

The year 1969 saw the United Kingdom’s Open University begin to offer courses at a distance, using a variety of mixed media, such as text, audio-visual material, broadcast radio and television as well as tutorial sessions and telephonic pedagogical support from tutors. However, from the mid-1990s, the United Kingdom’s Open University exploited the internet, propelling it to one of the world’s leading e-universities (Open University 2009:1). This marked a paradigm
shift in the way ODL was practised as it initiated the introduction of multimedia and saw a move
towards a more student-centred way of facilitation. The element of openness is addressed in the
definition used by Unisa (Unisa 2008:2) as the removal of barriers to access learning, flexibility
of learning provision, student-centredness, supporting students and constructing learning
programmes with the expectation that students can succeed.

ODL has also witnessed an evolution in terms of research foci. The initial focus of research in
the field of ODL was on comparisons between ODL and more conventional forms of education
and training. In the 1990s, an international research agenda was agreed upon by members of
ODL institutions which included the following: research on computer conferencing; a meta-
analysis of researchers’ values and assumptions; comparative institutional studies; analyses of
students’ life experiences; methods and technologies of small island countries; representation of
women in distance education materials; and the influences of planning and personal, institutional
contexts on student performance (Paulsen & Pinder in Black 2007:4). The developments in ODL
outlined in this study cannot be viewed in a vacuum, but rather as part of the interconnectedness
of various aspects of human progression. For the purposes of this research, it was necessary to
further trace the evolution of ODL by explaining the generations of distance learning. The
researcher deemed it important to view the generations of distance learning in the light of
developments in education as well as societal factors that impacted on educational development
and, by extension, ODL.

It is argued that the developments that occurred in ODeL were the result of the
interconnectedness of societal, technological and pedagogical innovations. The generations of
distance education are a depiction of the developments that have occurred in the field of distance
learning over time (see table 2.1). In line with the work of Heydenrych and Prinsloo (2010:6-7),
the next section provides a definition of the generations of distance education in terms of
different features in the various phases of development as well as paradigmatic shifts. Thereafter,
three developmental forces that have had an impact on the practice of ODL are outlined. The
forces that are highlighted are developments in society, pedagogy and the technology as well as
the resultant impact they had on ODL. Although these developments are presented separately,
the intention is to acknowledge the fact that they did not occur successively. These developments
occurred in an overlapping and in some cases at the same time in history. The developments highlighted in table 2.1 indicate a need for ODeL institutions to align their use of technological media and media blends with the current societal and pedagogical context. Coupled with this is the lack of evidence of online media blends that facilitate constructivist learning and observational learning.
### Table 2.1: Generations of distance education

<table>
<thead>
<tr>
<th>Generation</th>
<th>Pedagogy and interaction</th>
<th>Medium</th>
<th>Production</th>
<th>Storage</th>
<th>Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; (1451–1916 CE)</td>
<td><em>Behaviourism</em>. Content based and dominated by limitations of print technology – self-pacing – mass delivery</td>
<td>Text and images – the advent of film</td>
<td>Printing press, manual design and recording</td>
<td>Books and letters</td>
<td>Mail system</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; (1918–1955)</td>
<td><em>Behaviourism and cognitivism</em>. Content based with limited interaction – mass delivery of DE and controlled access based on gender, class/caste, culture and age</td>
<td>Text, images, sound and video (film) – the start of instructional television</td>
<td>Printing press, sound and video/film recording, manual and computer design/programming</td>
<td>Recordings – audio cassettes and video cassettes</td>
<td>Mail system/telephone/sound playback equipment</td>
</tr>
<tr>
<td>Period</td>
<td>Philosophy/Approach</td>
<td>Delivery Methods</td>
<td>Interaction Methods</td>
<td>ICT/Recording Technology</td>
<td></td>
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<tr>
<td>-------------</td>
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<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>4th (1969–2005)</td>
<td>Behaviourism/cognitivism/social constructivism or constructionism/enactivism/connectivism. Content starting to move away from the university – asynchronous and synchronous interaction – mass delivery becomes problematic and demands for interaction challenge ICTs</td>
<td>Text, images, sound and video</td>
<td></td>
<td>Mail system/ television/telephone/computers/video and sound playback equipment – first computers used to send batches of data</td>
<td></td>
</tr>
</tbody>
</table>

24
| 5<sup>th</sup> (present day) | Behaviourism/cognitivism/social constructivism/social constructivism/connectivism. Content starting to move away from the university – asynchronous and synchronous interaction – mass delivery becomes problematic and demands for interaction challenge ICTs. | Text, images, sound and video Web 2.0 interactive online technologies | Printing press, sound and video/film recording and computer design/programming/user involvement Blogs, mini-blogs, chats, email, message boards, online conferencing, social networks, wikis | Digital storage media (CD, DVD, memory sticks, central servers, hard drives, etc) Mail system/television/telephone/computers/video and sound playback – equipment – computers starting to become generic device and the WWW (internet) as a generic platform Asynchronous and synchronous delivery |

**Source:** Adapted from Heydenrych & Prinsloo (2010:5-26); Clark & Mayer (2008:284)
2.2.1 Societal developments and their impact on ODL

Societal changes have affected education in general in a number of ways. In the previous century, industrial information systems were the basis of the creation and exchange of information. The advent of the knowledge society, characterised by ideas, innovation and creativity, has had an impact on the design of teaching and learning. It has led to the potential maximisation of learning through cognitive means and the expanding and changing repertoire of research-informed teaching practices, continuous professional learning and self-monitoring, teamwork, learning partnerships, collective intelligence and problem solving (Hargreaves in Sahlberg & Boce 2010:34)

One of the results of the transition to a knowledge society includes continuous professional development. Continuous professional development is one of the areas in which ODL has played a pivotal part. ODL programmes have led to the continuous professional development of lecturers and health professionals in Africa and elsewhere. Nigeria has used ODL initiatives for human capital development (Olakulehin 2008:123-130). Another initiative is the Bachelor of Education programme offered at a distance by the University of Bolton in order to upgrade the teaching skills and competencies of lecturers in Technical and Vocational Education in Zambia (Smith 2010:223-233). In South Africa, the creation of a democratic government in 1994 and the adoption of a new outcomes-based curriculum necessitated the development of professionals in education and training. ODL played a pivotal role in upgrading the skills and qualifications of South African lecturers (Nengegbule, Glennie & Perold 1992:3). With the restructuring of the higher education landscape, Unisa, the University of Stellenbosch, the North-West University, the University of Port Elizabeth, the University of Pretoria and the Rand Afrikaanse University offered ODL courses for the development of lecturers in South Africa (Wyngaard [sa]:3-5).

The current knowledge society requires continuous professional development that allows for problem solving and teamwork in the creation of new knowledge. ODL programmes should therefore accommodate learning that is based on elements that create new knowledge.

The massification of education is another societal factor that has affected ODL. Massification is a term used to describe the expansion of higher education systems. It thus led to changes in
existent student-lecturer relations, society-university nexus and the reduction of elitism in higher education (Xiang 2004:1). Massification arose as a central phenomenon in 21st-century education, from the shift to post-industrial economies to the rise of service industries. The movement to a knowledge economy has also led to increased enrolment in higher education across the globe. There has also been a massification of education across the globe and in sub-Saharan Africa although not as marked as that seen in the developed north (see figure 2.1). The results of massification are evident around the world. In China, for example, the growth in the demand for higher education coupled with education informalisation and the construction of a learning-oriented society has led to growth in the ODL sector (Xin, Jian & Yanhui 2010:584). In South Africa, the new democratic government anticipated and encouraged the massification trend. This led to high expectations about the role that distance education would play across the system by increasing access and cost effectiveness (Badat 2005:192). A comparison of the figures for the year 2000 with those for 2007 indicates growth in the percentage of the populations across various regions of the world that enrolled for higher education (see figure 2.1).

Globalisation and democratisation have similarly had an impact on ODL in a number of ways. Through the relative ease of communication, and the interconnectivity of global economies, cross-border education is increasing, and is likely to further increase, to serve a global marketplace (Olcott 2009). An element of cross-border education is the availability of open education resources (OERs). These resources reside in the public domain, or are available under intellectual property license, for use by anyone who can access them. They include full courses, course materials, modules, textbooks, streaming videos, tests, software and any other tools and materials or
techniques used to support access to knowledge (William & Flora Hewlett Foundation in Kumar 2009:78). OERs also allow for online access to previously printed educational content across borders where adequate broadband connectivity and technological infrastructure permit (Kumar 2009:79). The implication of this aspect of globalization for ODL includes the possibility of students accessing course material in real time, irrespective of geographical constraints. This is analogous to the fifth generation of distance education in which interactive technology is a feature. The development of OERs is an indication of the role globalisation has played in ODL through the provision of free access to digital content. It is an initiative that allows for access to courses designed by various educational institutions as well as to extend the reach and impact of the open course ware concept, which was an initiative of the Massachusetts Institute of Technology (MIT). Today, consortia comprising educational institutions that are offering OER material on digital forums include the China Open Resource for Education (CORE), the Japan Open Course Ware Consortium and the ParisTech graduate school. Institutions with strong service missions such as John Hopkins University, Tufts University, the University of Notre
Dame and the Utah State University began to offer open course ware at the beginning of this century (Carson 2009:26-27). In 2004, initiatives by the University of the Western Cape in South Africa led to discourse around digital freedom, global commons and free learning resources. These initiatives planted the seed for the placing of OERs on the global platform, a process that started in 2009 (Keats 2009:50-53). Stellenbosch University in South Africa has joined the OER movement and currently has its research output on an open repository SUNscholar with an initiative to launch 14 journal titles on the open platform, Open Journal Systems (Stellenbosch University 2011).

Another example of the role of OERs in the facilitation of learning lies in the changes in language usage in the current global context. With globalisation, English has become the main language used in knowledge economies. There is a need for training and upgrading of lecturers’ English language skills in South Asia (Power, Deane & Hedges 2009:1-3). A model that was developed to train and retrain lecturers in language as well as practice in mathematics, science, social sciences arts and life skills in sub-Saharan Africa is seen as a viable option for language training needs in South Asia owing to the commonalities shared between South Asia and sub-Saharan Africa. The commonalities include the challenges faced in implementing lecturer change and school improvement strategies and fostering inter-institutional and international collaboration across cultural, religious and linguistic barriers. An example of an African OER model is the Lecturer Education in the Teacher Education of sub-Saharan Africa (TESSA) initiative, which is in use in a number of African countries including Ghana, Kenya, Nigeria, Rwanda, South Africa, Sudan, Tanzania, Uganda and Sudan. Local contexts are reflected in the TESSA material which is collaboratively produced (Power et al 2009:1-10). These open access and open course initiatives play a role in the field of learning and allow for mobilisation of academics to leverage their expertise and build a shared educational infrastructure and learning network (Lee, Albright, O’Leary, Geronimo & Wilson 2008:159). OERs may be enhanced through the use of wikis, blogs and discussion boards in order to stimulate constructivist and observational learning.

In summation, the societal developments outlined above not only reflect changes in the way knowledge is created, but also illustrate the need for educational practices to respond to changes in society. This acknowledges the fact that education and ODL function in a dynamic society.
2.2.2 Technological developments in ODL

The technological interventions used to facilitate teaching and learning have also evolved, and this study addresses some of the key developments in this field that impact on ODL. The incipient form of ODL relied on print-based media as a means of knowledge transfer. Audio-visual material, computer-mediated communication and online interactive multimedia, as well as internet-based access to online resources supplemented print-based media (Lou, Bernard & Abrami 2006:141-176). These technological developments occurred in congruence with pedagogical and, in some cases, societal changes. Of note is the impact the Industrial Revolution had on the production of print-based material and the curriculum and the nature of students. The move of the average worker in the industrialised north, from the farm to the factory, was a defining feature of the Industrial Revolution (Blinder 2008:4). Writers have linked developments in ODeL with advances in communication technology (Horvath, Peck & Verlinden 2009:465-466). These technologies make possible the reduction of the transactional distance in ODL environments. Moore and Kearsley (2005:224) define transactional distance as the interplay between lecturers, students and educational institutions, which results in a physical and psychological space. This psychological space may potentially lead to misunderstandings between the students and their lecturers – hence the need for special teaching techniques to bridge the gap. Moore (1972:76-87) and Keegan (1990) also allude to mediation occurring in distance learning environments through physical devices.

Early use of technological media for distance education focused on bridging the geographical gap between students and the instructors through the mass production and delivery of coursework. A learning approach described as “traditional” science formed the basis of the early technological media usage in ODL. The Cartesian dictum approach was the basis of traditional science. A learning theory that viewed learning as occurring through the organising of learning content in manageable and understandable chunks for delivery to students formed the grounding for this paradigm (Saba 2007:45-53). The shortcoming of this view of distance education was the complexity and interplay of various elements in the learning experience – hence the move to a systems approach in distance education that incorporated a variety of technologies to facilitate learning. Moore and Kearsley (Saba 2007:45) in supporting the founding of the Articulated
Instructional Media project, highlight the idea of using a variety of media for presenting the content better than through any one medium alone. However, this also meant that people with different learning styles could choose the particular combination that was best suited to their needs. This idea was instrumental in the founding of the British Open University (Sherow & Wedemeyer in Garrison 2000; Moore in Saba 2007:45).

The key role that technological media played and continue to play in the field of ODL formed the basis of this research. As indicated earlier, online technologies are instrumental in the fifth generation of distance education and, as such, are key conduits in the facilitation of constructivist and observational learning in the fields of online learning and ODL.

### 2.2.3 Pedagogical developments and their impact on ODL

While there are a number of definitions of pedagogy and the mistaking of pedagogy and curriculum (Sylva et al 2010:149), The researcher used Gage’s (1985) definition of pedagogy. Gage (1985) in Sylva et al (2010:149) who defines pedagogy as the scientific basis for the art of teaching. Changes in pedagogy emerged largely as a result of developments in the research field of psychology with particular reference to how human beings learn. Two polar schools of thought emerged through history that tried to explain the learning process. This study investigated the schools of thought as emerging at various times in history, although there is evidence of overlapping and in some cases concessions between the beliefs. This study, like that of Ally (2008:20-33), alludes to the need to incorporate elements from both the schools of thought in a framework for online learning. The pedagogical developments are presented in terms of their influence on the practice of ODL through the generations, as discussed earlier in this chapter.

Based on her reading, the researcher grouped learning theories into two schools of thought, namely the behaviourism and cognitive theories. The main difference between the two is the emphasis on observable changes in behaviour by the behaviourists, and the internal mental activities of information processing, representation and self-awareness associated with cognitive theories (Lefrancois 2006). The early psychologists who studied human learning came from the behaviourist school of thought. Ivan Pavlov (Doroshow2010:318), a Russian psychologist,
devised a series of experiments on classical conditioning, also known as Pavlovian conditioning, using his dog. This work created the grounds for the behaviourist learning theories such as emotional learning, which believed that emotional reflexes were a response to specific stimuli (Doroshow 2010:318). A learning theory emanating from conditioning is environmentalism, which espouses that nurture, as opposed to nature, determines learning. The debate on the role of nature versus nurture in learning is still alive, with believers on either side. The proponents of the view that nature influences learning, lean towards the role genomic predisposition plays in a person’s ability to learn (Oliver et al 2004:504-517). However, researchers who espouse the view that the environment affects learning achievement and development include Anderman (2002:795-809) and Dorman, Adams and Ferguson (2002:499-511). Related to this view is the role perceptions of learning environments playing learning outcomes. The research indicates that students’ perceptions, which are a product of their social experience and background, have a profound effect on learning achievement and development (Wright & Cowen 1982:687-703).

Another human learning theory that is linked to Pavlovian theory is Guthrie’s (Lefrancois 2006:66) focus on objective stimuli and responses and the conditions in which they occur. This theory is based on contiguity, “whatever response follows a stimulus is likely to follow that stimulus again when the stimulus is repeated”. Guthrie (Lefrancois 2006:66), views behaviourism, which is employed in teaching and learning, as mechanical because it does not take into consideration the dynamism of human experience and the effects this may have on the learning process. To the behaviourist, outcomes are predictable, depending on the stimulus applied and regardless of the individualistic nature of human experience and the consequent impact on the learning process. Kelly in Gulati (2008:183-192) equates behaviourism with objectivism, which assumes that knowledge can be imparted from lecturer to student through instruction, lectures and practice. The accumulation of facts and agreed dominant knowledge can lead to true reality.

The impact of behaviourism on ODL is reflected in lecturer-centred approaches which were and are still used to facilitate learning in ODL contexts. Behaviourism provided the theoretical underpinnings for curriculum development and implementation for a number of decades (Yilmaz 2011:204). The first generation of distance learning alludes exclusively to behavioural pedagogy
(see table 2.1). Hence ODL practices that do not allow for reflection and construction of personal meaning are underpinned by behaviourism.

Conversely, cognitive theories of learning emerged from the works of Kurt Koffka, Wolfgang Kohler and Max Wertheimer in (Sokal 1984:1240-1263), who are known for their postulation of Gestalt psychology. Gestalt psychology literally translated states that the whole is greater than the sum of its parts. In relation to human learning, the influence of direct experience in the process of learning was elevated. Gestalt theory contributed to cognitive learning theories (Papadopoulou & Birch 2008:283-284). The distinction gestalt theory made between external reality and internal perceptions is important in the field of cognitive psychology. Cognitive pedagogy emerged in the second generation of distance education (see table 2.1). Cognitive psychology is concerned with the internal higher mental functions of human behaviour and learning. These functions include perception, concept formation, memory, language, thinking, problem solving and decision making (see table 2.2). Cognitive theories gave rise to constructivism which is a key element of this research. Constructivism as a learning paradigm was incorporated in the third, fourth and fifth generations of distance learning (see table 2.1). In this study, constructivism is dealt with in detail as part of the theoretical and conceptual framework later in this chapter. The next section focuses on the pedagogical affordances of online social media and the concepts and terms germane to this research.

Table 2.2: Principal differences between behaviourism and cognitivism

<table>
<thead>
<tr>
<th>Principal concepts</th>
<th>Behaviourism</th>
<th>Cognitivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimuli, responses, higher mental processes (thinking, imagining, problem solving)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reinforcement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machine-like qualities of human functioning (robotic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information-processing and computer-based metaphors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most common research: Animals; some human. Humans; some nonhuman.
<table>
<thead>
<tr>
<th>subjects</th>
<th>research subjects</th>
<th>animal research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main goals</strong></td>
<td>To discover predictable relationships between stimuli, responses, and response consequences</td>
<td>To make useful inferences about mental processes that intervene to influence and determine behaviour</td>
</tr>
<tr>
<td><strong>Scope of theories</strong></td>
<td>Often intended to explain all significant aspects of behavior</td>
<td>Generally more limited in scope; intended to explain more specific behaviours and processes</td>
</tr>
<tr>
<td><strong>Representative theorists</strong></td>
<td>Watson, Pavlov, Guthrie, Skinner, Hull</td>
<td>Gestalt psychologists, Bruner, Piaget, Vygotsky, connectionist theorists</td>
</tr>
</tbody>
</table>

Source: Lefrancois (2006:217)

### 2.3 Pedagogical affordances of online learning

This research focused on online media blends for constructivist and observational learning in an ODL environment. This section starts by defining online learning and reflecting on the pedagogical affordance this form of education and training provides. Online learning is defined as learning through which learning material is accessed via the internet and interaction is facilitated between the students, the content and the instructor, who attain support during the learning process in order to acquire knowledge, construct personal meaning and grow from the learning experience (Ally 2008:19). As with any technological media utilised to facilitate the learning process, the success is influenced by the way in which the technological media are used. The instructional strategies built into the technological media contribute to determining the success of learning outcomes (Rovai in Ally 2008:18).

Online learning allows for a variety of learning affordances such as the elimination of time and physical distance between the student, his or her peers and the instructor. Learning activities may
occur both asynchronously at any time suitable to the students and instructors or synchronously through real-time interactions. It allows for updating of content to occur and be instantly accessible to students. These benefits are available through a variety of online applications and tools such as access resources, presence declaration resources, expression resources, creation resources, interaction resources and aggregation resources (see table 2.3). Blogs and Skype allow for students to be present, to create and interact with the content and one another. Wikis, which allow students to create and interact with information, also act as a resource for updated information. Second life is a synchronous web-based tool that facilitates online presence, real-time expression and interaction between various participants in the learning process. Facebook, while facilitating online presence, expression and interaction, also allows participants to aggregate postings on the site for future reference. Google Reader facilitates access to information and also allows for the aggregation of information for use by users. In addition to aggregation, Google Reader allows for the sharing of content between users using the Google+ application.

It is against this backdrop of online media affordances that the current study endeavoured to explore the various online media blends that best stimulate constructivist learning and observational learning among Unisa students.

**Table 2.3: Affordances of online media**

<table>
<thead>
<tr>
<th>Online applications</th>
<th>Access</th>
<th>Presence</th>
<th>Expression</th>
<th>Creation</th>
<th>Interaction</th>
<th>Aggregation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skype</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wikis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facebook</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Google</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
In addition, Juwah (2010:24-25), summarises the ways in which emerging online social media may be used in teaching and learning (see table 2.4). With all these applications available to lecturers who are engaged in online learning programmes, the choice of which applications to employ becomes paramount, depending on the learning outcomes the programme seeks to achieve. The choices made should be based on which applications and tools best facilitate learning in a relevant and appropriate manner, while taking into account factors such as access to the technology, the profiles of students, the context of teaching and learning and the discipline.

**Table 2.4: Online media affordances**

<table>
<thead>
<tr>
<th>Blogs</th>
<th>Promote reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Support for learning</td>
</tr>
<tr>
<td></td>
<td>Social support minimises feelings of isolation</td>
</tr>
<tr>
<td>Wikis</td>
<td>Promote collaboration</td>
</tr>
<tr>
<td></td>
<td>Promote student-managed learning and construction of meaning and knowledge</td>
</tr>
<tr>
<td></td>
<td>Are repositories of knowledge and suitable for learning histories and revisions</td>
</tr>
<tr>
<td>Podcasts</td>
<td>Aid clarification of facts</td>
</tr>
<tr>
<td></td>
<td>Enhance understanding</td>
</tr>
<tr>
<td></td>
<td>Consolidate knowledge</td>
</tr>
<tr>
<td></td>
<td>Minimise anxiety</td>
</tr>
<tr>
<td>Twitter</td>
<td>Build networks and communities</td>
</tr>
</tbody>
</table>
| (microblogs) | Broadcast information  
Provide feedback/feed forward on student performance |
| Chats | Role play practice, group discussion making, group project work, pair collaborative study, questions or comments during a virtual presentation |
| Email | Group project work, instructor-student exchanges, pair collaborative activities |
| Videoconferencing | Promotes collaboration, discussion, dialogue, and negotiation of meaning |
| Discussion boards/forum | Promotes collaboration, discussion, analysis, synthesis, evaluation and reflection |
| Virtual reality software | Promotes intellectual, decision and judgement making skills through simulation or virtual reality learning |

Source: Adapted from Juwah (2010:24-25); Clark & Mayer (2008:284-285)

2.4 Online media for learning

This study explored online media blends for constructivist and observational learning. Because learning environments comprise media used in the learning process, the analysis of research started by addressing the role media play in the creation of learning environments. This will be followed by a critical analysis of studies that have addressed learning environments and their effects on constructivist learning. The second part of the analysis reviews studies that have addressed online media blends for constructivist and observational learning.

2.4.1 The role of online media in learning environments

Learning environments are instructional systems because they are a set of elements that support the learning process (Gagne, Wager, Golas & Keller 2005:20). Learning environments in the current study focused on the media used in the learning process as well as the instructional pedagogical leanings. The need for a learning environment that stimulates constructivist, higher-order thinking is emphasized by DeCorte, et al (2009:503-513). Furthermore, student-centred learning environments have the potential to provide these learning environments (Dart 1997:30-43; Lea, Stephenson & Stephenson 2003:321-334; Simons, Van der Linden & Duffy 2000:1-20).
Technological media form an element of the learning environment and as such, the researcher argues that learning environments play a part in learning outcomes. According to Gagne et al (2005:22), the ADDIE instructional design model, which is also a learning environment model, denotes the role media play in the learning process. In the ADDIE model of instructional systems design (see table 2.5), the media used to aid the achievement of learning outcomes is specified in the development part of the model. The model delineates the various components of instructional design. The first is the analysis of what the specific programme seeks to achieve. This section also defines the prior competencies the students require and provides a recommended timeframe for achievement of the learning outcomes. The design component of this model outlines specific objectives, learning activities and assessment criteria for the programme. The third component relates to the facilitation of the desired learning outcomes through the use of various resources. It is in this section that the identification of the necessary technological media takes place. This is followed by the support and implementation stage of the learning process and finally the evaluation of the learning programme for the purposes of revision or maintenance. In the developmental stage of the ADDIE model, which the researcher posits is a learning environment, the media best suited to facilitate learning are identified. Others researchers who refer to learning environments based on the media used to facilitate learning include Wong, Chin, Tan and Liu (2010:15-26) and Yang and Lin (2010:195-207).

Learning environments may also refer to pedagogical approaches used in the learning process. So and Bonk (2010:189-200) refer to the use of a pedagogical approach as a learning environment, with other researchers linking the technology to the pedagogy in the creation of learning environments. These include El-Bishouty, Ogata, Rahman and Yano (2010: 27-37) and Hwang, Chu, Shih, Huang and Tsai (2010: 53-64).

For the purposes of this study, the role media plays in creating a learning environment was juxtaposed with the pedagogical approaches used to create the learning environment. In the study at Unisa, the researcher thus took into consideration the effects learning environment (media and pedagogical approaches) has on constructivist and observational learning.
Table 2.5: Summary of ADDIE model components and sub-components

<table>
<thead>
<tr>
<th>Components</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Analysis</td>
<td>a. First determine the needs for which instruction is the solution.</td>
</tr>
<tr>
<td></td>
<td>b. Conduct an instructional analysis to determine the target cognitive, affective and motor skill goals for the course.</td>
</tr>
<tr>
<td></td>
<td>c. Determine what skills the entering students are expected to have, and which impact learning in the course.</td>
</tr>
<tr>
<td></td>
<td>d. Analyze the time available and how much might be accomplished in that period of time. Some authors also recommend a context or resources analysis.</td>
</tr>
<tr>
<td>II. Design</td>
<td>a. Translate course goals into performance outcomes, and major course objectives (unit objectives).</td>
</tr>
<tr>
<td></td>
<td>b. Determine the instructional topics or units to be covered, and how much time will be spent on each.</td>
</tr>
<tr>
<td></td>
<td>c. Sequence the units with regard to the course objectives.</td>
</tr>
<tr>
<td></td>
<td>d. Flesh out the units of instruction, identifying the major objectives to be achieved during each unit.</td>
</tr>
<tr>
<td></td>
<td>e. Define lessons and learning activities for each unit.</td>
</tr>
<tr>
<td></td>
<td>f. Develop specifications for assessment of what students have learned.</td>
</tr>
<tr>
<td>III. Development</td>
<td>a. Make decisions regarding the types of</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Learning environment effects on constructivist learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>This review of related literature on the effects of learning environments on constructivist learning revealed the existence of three views on how to foster learning. The first view posits that appropriate learning environments foster constructivist learning. The proponents of this view include Albanese and Mitchell, Biggs and Blumberg (in Gijbels et al 2009:503-513) and Greening (1998:23-35). The second view postulated that new educational innovations resulted in surface learning (Struyven, Dochy, Janssens &amp; Gielen 2006:1-16). According to a third view, student-activating teaching methods foster deep learning that is active, transitive and constructive. Proponents of this view include Struyven et al (2006:1-16); Bonwell and Sutherland (1996:3-16); De Corte (2000:246-266); Hatch and Farris (1989:89-97); Holt-Reynolds (2000:21-32); Kroll and Laboskey (1996:63-72) and Tynajala (1997:277-292) The above views are discussed in relation to their design and methodological orientation in order to place this research in this knowledge base.</td>
</tr>
</tbody>
</table>
While the findings and results of prior studies have contributed to the understanding of learning environments for fostering constructivist learning, sourced research studies have adopted positivist approaches and alternative theoretical and conceptual groundings, methodologies and samples (Sultan, Woods & Koo 2011:149-163; Liang & Tsai 2008:226-237). Others have investigated the use of single online media applications in fostering constructivist learning (Ng’ambi & Lombe 2012:181-192; Dickey 2003:105-121), and nonspecific online tools and applications (Hung & Cheng 2003:7-14). Other research studies were conducted prior to the advent of the participatory Web 2.0 online tools and applications (Dickey 2003:105-121). This section highlights prior research conducted on learning environments and constructivist learning.

Sultan et al (2011:149-163) report on the results of a quantitative study conducted in Malaysian schools to investigate the influences of constructivist learning environments on learning. The sample for the study was computer-literate, English-speaking students who had been exposed to different e-learning resources and had access to the internet. Data were collected by means of a constructed model which was validated using careful selection of dimensions based on related literature and suggested methods for constructs and scale development obtained from pretested studies (Churchill in Sultan et al 2011:154). The conceptual framework was a hypothetical constructivist learning environment model (CLEM) developed from a literature review of operational and theoretical definitions of the main research concepts, adapted from Taylor, Fraser and Fisher and Windshitl (Sultan et al 2011:150). The results of the study contributed to the understanding of learning environments for constructivist learning. The findings of this study revealed that students’ constructivist learning environment is positively related to their perceived learning outcomes. While a number of technological tools were used by the sample in this study, not all were online applications. In addition, the sample consisted of primary and secondary school science students who, while having been exposed to e-learning resources and having access to the internet, were not pursuing online learning programs.

A similar study conducted in Taiwan on 365 college students used a quantitative survey to gather data to explore the relationship between internet self-efficacy and preferences for constructivist
internet-based learning environments (Liang & Tsai 2008:226-237). The focus of this study was self-efficacy, which is an individual learner’s beliefs, expectations and perceived confidence in his or her capability to perform a task (Bandura in Liang & Tsai 2008:226). Methodologically, Liang and Tsai (2008:226-237) used a sample of 365 college students and a tool, structural equation modelling, to collect data. The data collection instrument was a five-point Likert scale for exploring student views. This study made recommendations on the implementation of constructivist internet-based learning environments. The results of this study showed that students with higher internet efficacy preferred internet learning environments.

Gijbels et al (2009:503-513) reported on the findings of Biggs, Albanese and Mitchell, Greening and Blumberg on the role of appropriate learning environments and constructivist learning. The studies reported on by Gijbels et al (2009:503-513) occurred prior to the use of collaborative online via the participative web (Web 2.0). Siemens and Tittenburger (2009:7) allude to the novelty of Web 2.0 technology and argue that “growing hype over the last five years suggests that 'Web 2.0’ or the ’read/write web’ is of sufficient force to require universities to alter the process of curriculum creation and teaching and learning.” Although the findings of these prior studies are of importance, the age of these studies is significant, given the dynamic nature of technology. Similarly, Dickey (2003:105-121) reports on a qualitative study of the pedagogical implications of using one 3D virtual world, Active Worlds, for synchronous distance education. The methods employed in this study include participatory observations, class logs and formal and informal interviews with the instructor of a synchronous distance learning course offered through Active Worlds University. The findings of this study were that Active Worlds provides tools that support constructivist learning environments. This research was disseminated in 2003 and formal and informal interviews were conducted with one instructor in 2001. The studies cited above were conducted before 2000, when Web 2.0 technology was in its infancy. The current research extends these studies as they occurred in 2013 with more online media applications available. Although wikis and blogs originated in the late 1990s, they only started becoming mainstream after 2004, with about five million bloggers worldwide. This number of global bloggers grew to 50 million in 2005, and continues to grow (Ryu & Shi in Rutt 2011:1). The study by Dickey (2003:105-121) interviewed one participant who was a lecturer.
Kerhwald (2008:89-100) reports on the findings of a theory generative study into social presence in text-based online learning environment. This particular study examined the nature of the social presence experienced by online learners in text-based learning environments. While contributing to the nature of experienced social presence by online learners, this particular study focused on text-based online learning. Similarly, Ruey (2010:706-720) reports on a case study that explored how a constructivist-based instructional design helped adult learners in an online learning environment. This case study provides valuable insight into the facilitation of adult learning using Patton’s (Ruey 2010:710) theoretical stance of social constructivism to guide the qualitative inquiries. Kerhwald’s (2008:89-100) study was generative in the sense that it sought to understand online social presence as experienced by online learners using a qualitative and constructivist approach. Utilising a collective case study, four cases offering wholly online postgraduate courses in education were studied with respect to issues identified in the research question of the study. The findings from Kerhwald’s (2008:89-100) study revealed the participants’ understanding and perceived role and function of social presence in online learning environments. The study also revealed the way in which social presence is established and sustained in text-based online learning environments as well as support for a relational view of social presence (Kerhwald 2008:94).

The current research explored constructivism and observational learning in an online learning environment at a mega university using observational learning based on Bandura’s (2001:265-299) social cognitive theory as well as constructivism as described by Baviskar et al (2009:543-544). While other studies such as those of Yuen and Hau (2006:279-290) and Hmelo-Silver (2004:235-266) report on the gains made by constructivist learning, the focus of the current research is online social media, constructivist learning and observational learning.

The findings of this research have implications for interactive online usage. The researcher addressed previously reported related studies that focus on learning environments and constructivist learning. The relationship between the prior studies and this research is highlighted in order to elucidate how the latter fits into the broader body of knowledge. The next section outlines prior research on new educational innovations resulting in surface learning.
2.4.2.2 New educational innovations resulting in surface learning

Chuang, Chiang, Yang and Tsai (2012:226-239) conducted research on a pairing strategy for collaborative learning. This strategy revealed gains in learning achievement through observation and modelling. While this study was a quantitative one, the current one was qualitative with the focus on constructivist learning outcomes.

Tsai (2011:145-152) proposes a hybrid e-learning model incorporating some of the principal learning theories. This model is of use to planners of online learning environments and is conceptual and is not based on empirical research. In the case of the study conducted at Unisa, the research methodology employed was qualitative and the findings could foster an understanding of online media applications that may stimulate constructivist and observational learning. The methodology allowed for an in-depth understanding of the lived experiences of the participants (Cresswell 2009:13)

2.4.2.3 Student-activating teaching methods fostering deep learning

The studies that indicated student-activating methods (constructivist learning) resulted in surface learning as opposed to deep learning and revealed methodological shortcomings that may have had an effect on the generalisability of their findings. The fundamental differences and characteristics between surface and deep learning are depicted in table 2.6. The study by Struyven et al (2006:1-16) “investigates the effects of the learning/teaching environment on students approaches to learning (i.e. combination of learning intention and learning strategies) and compares a lecture-based to student-activating setting within the first year of elementary lecturer education”. The results of this particular study indicate that student-activating teaching environments lead to surface approaches to learning. Unresolved issues arising from the results include questions such as the following: “What caused the pre-existing differences in the case-based condition and the active multiple-choice condition? Why did the deep approach scores drop only in the portfolio and case-based condition, and not all student-activating conditions, considering the equal levels of workload for students? Neither conceptual reasoning, nor
arguments in the interviews, provide plausible arguments to explain these results” (Struyven et al 2006:12).

Struyven et al (2006:1-16) used a quantitative approach which as a research approach does not allow for in-depth subjective perspectives and descriptions. The study conducted at Unisa allowed for the interpretation of students’ and lecturers’ lived experiences and thus helped the researcher to understand the phenomenon from the multiple perspectives of those who experience it.

The research on the approaches to study and their impact on the need for support and guidance in distance learning (Carnwell 2000:123-140) provides an overview of various learning styles and the subsequent support required in distance learning environments. This study focuses on distance learning in general and was published 13 years ago. The current study focused on online learning as an aspect of ODL and relates to current relationships between constructivist learning and observational learning.

The interpretivist paradigms afford those experiencing the phenomenon under investigation the opportunity to provide in-depth accounts of their experiences of the phenomenon. This allows the researcher to gain a deep understanding of the phenomenon from the perspective of the participant. This explains why the researcher decided to use the qualitative interpretivist design as a means of gathering data on the experiences of participants who engage or have engaged in online learning. As stipulated above, a number of studies have investigated online learning using quantitative designs. The researcher thus opted to use a qualitative design to gain a deeper understanding of the online learning experience.
Table 2.6: The characteristics and factors that encourage deep and surface approaches to learning

<table>
<thead>
<tr>
<th></th>
<th>Deep learning</th>
<th>Surface Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Examining new facts and ideas critically and tying them into existing cognitive structures and making numerous links between ideas</td>
<td>Accepting new facts and ideas uncritically and attempting to store them as isolated, unconnected</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td>Looking for meaning</td>
<td>Relying on rote learning</td>
</tr>
<tr>
<td></td>
<td>Focusing on the central argument or concepts needed to solve a problem</td>
<td>Focusing on outward signs and the formulae needed to solve a problem</td>
</tr>
<tr>
<td></td>
<td>Interacting actively</td>
<td>Receiving information passively. Failing to distinguish principles from examples</td>
</tr>
<tr>
<td></td>
<td>Distinguishing between argument and evidence</td>
<td>Treating parts of modules as separate</td>
</tr>
<tr>
<td></td>
<td>Making connections between different modules</td>
<td>Not recognizing new material as building on previous work</td>
</tr>
<tr>
<td></td>
<td>Relating new and previous knowledge</td>
<td>Seeing course content simply as material to be learnt for the exam</td>
</tr>
<tr>
<td></td>
<td>Linking course content to real life</td>
<td></td>
</tr>
</tbody>
</table>


2.4.3 Online learning media for constructivist and observational learning

Research that has addressed the gains of constructivist methods in the enhancement of learning outcomes includes that of Akar and Yildirim (2009:401-415). Others allude to the positive role
feedback plays in constructivist online learning (Espasa & Meneses 2010:277-292). These studies have contributed to a deeper understanding of constructivism and how to foster constructivist learning in online learning environments. As an extension of these studies, the current research departs from two theoretical perspectives and provides guidelines on stimulating constructivist learning by employing appropriate online media blends. Similarly, Gulati (2008:183-192) examined whether emerging online formal education practices advocate a constructivist view of knowledge. The findings suggest that emerging online pedagogy provides limited appreciation of diverse learning preferences which is a central aspect of constructivism. The conclusions drawn from this examination were from the researcher’s on-going doctoral study. The current study contributes to the understanding of current online learning practices. The research advances this study by linking constructivism to online learning with particular emphasis on social media affordances and observational learning through social cognitive theory (Bandura 2001:265-299).

Cooner’s (2010:271-286) examination of students’ experiences of developing their reflective skills found that access to online learning through online lectures, communications tools, a workbook and online video case studies can encourage students to reflect. This affords them opportunities to reframe and reinterpret existing knowledge. The current study took these findings a step further because it considered the experiences of lecturers and students through online social media. In addition, reflection served as only one of the criteria for constructivist learning (Baviskar et al 2009:543-544).

Jacobs (2005:761-768) reports on an investigation of interactive online visual tools for the learning of mathematics. This investigation demonstrates the innovative online features for teaching mathematics and contributes to the understanding of available online features. The focus of the current research was not discipline specific and adds to knowledge on online features for constructivist learning and observational learning in general.

Studies have addressed issues of trust in collaborative online learning groups and have suggested measures for the recognition and resolution of trust issues (Smith 2011:19-23). The cited research on online learning blends and constructivism was conducted from various perspectives and in various learning environments. Studies have also revealed a misinterpretation of
constructivist teaching and learning, resulting in teaching and learning methods being inappropriately referred to as constructivist (Gordon 2009:737-746).

In observational learning, the use of collaboratively observed videos as a means of achieving observational learning has been established in the literature (Craig et al 2009:779-789). In addition, videos have also been proven to be suitable means through which individuals with special needs can be effectively taught socially expressive behaviours (Charlop, Dennis, Carpenter & Greenberg 2010:371-393; Charlop-Christy, Le & Freeman 2000:537-552; Geiger, LeBlanc, Dillon & Bates 2010:279-383; Nikopoulos & Keenan 2003:87-108; Sherer et al 2001:140-148) and vocational and life skills (Keen, Brannigan & Cuskelly 2007:291-303; LeBlanc 2010:333-337). These studies have contributed to an understanding of the role video-based media plays in fostering learning among learners with special needs.

However, in the current research, the use of online media applications that stimulate constructivist and observational learning offered insight into its feasibility in an online learning environment. The next section explains the theoretical and conceptual framework that grounded this research.

2.5 Theoretical and conceptual framework

This section of the chapter deals with the theoretical and conceptual framework that guided the research. The theoretical and conceptual framework for this study consisted of constructivism as a learning theory and the functions of observational learning based on social cognitive theory (Bandura 2001:265-299). Hence constructivism is explained, followed by a discussion of Bandura’s (2001:273) functions of observational learning.

2.5.1 Constructivism

Constructivist learning formed an integral part of this research and is a part of the conceptual framework through which the research was conducted. In this section, the term “constructivism” is defined and its development traced. It is then presented as a paradigm shift in the approach to learning.
The gestalt perspective was explained in the preceding section. This perspective supports constructivism, which encourages active as opposed to passive learning. This, according to Gabler and Schroeder (2003), leads to the student constructing knowledge and becoming a critical thinker and independent student under the mentorship of the lecturer who facilitates the learning process. Cognitive theorists thus place meaning making at an internal individual level. The students are seen as achieving learning objectives through the processes of experiencing new phenomena, interpreting the experiences based on prior knowledge, reasoning about the new experiences and reflecting on their experiences. The reasoning process leads to meaning making on the part of the students (Gholson & Craig 2006:119-139). An offshoot of cognitive theory is constructivist theory. According to Baviskar et al (2009:543-544), constructivism is not a curriculum design theory, but rather learning that is designed and implemented in such a way that it allows individual students to construct knowledge. The four criteria identified by Baviskar et al (2009:543-544) for ensuring constructivist learning were used as the guiding framework for this research. Since constructivism presupposes that all new knowledge is constructed from a student’s prior knowledge, the first criterion is the eliciting of prior knowledge. The second criterion is the student’s awareness of a difference between his or her prior knowledge and the new knowledge. This is the creation of cognitive dissonance. The third criterion is the application of knowledge with feedback. The fourth criterion is the opportunity to express the new knowledge acquired through reflection on learning. This is achieved using assessment techniques such as presentations and examinations (Baviskar et al 2009:543-544).

Constructivism in education is based on the works of Lev Vygotsky (Pritchard 2009:254), a Russian psychologist, and Jean Piaget. The common thread that links the two schools of constructivist thought is that learning occurs when the students create new knowledge based on existing knowledge which they inherently possess. However, there are differences in Vygotsky’s (Pritchard 2009:254) constructivism which is known as social constructivism and Piaget’s (1999:157) constructivism, which is referred to as cognitive constructivism.

2.5.1.1 Cognitive constructivism

Piaget’s theory is concerned with mental representation and the way in which students gain a more advanced understanding of their environment and themselves. Intellectual development
grows successively in a regular pattern which is comparable with the stages of an ontogenesis. The speed of intellectual development may vary from individual to individual and also from one social environment to another, but this does not change the order of the succession of the stages (Piaget 1999:157). Even though Piaget’s theory is regarded as human development theory, according to Pritchard (2009:254), it is deemed to be a learning theory as well and characterises learning as a gradual developmental process made possible through the interaction of the child with the environment. Another characteristic is the assumption that the sophistication of children’s representation of the world is a function of their stage of development. That stage is defined by the thought structures they then possess. Piaget’s theory also assumes that maturation, active experience, equilibrium and social interaction are the forces that shape learning (Pritchard 2009:254).

Piaget’s theory is concerned with the individual internal construction of meaning by students. Although this is a ground-breaking theory, it has been criticised as being inaccurate in its estimation of children’s ability to learn (Pritchard 2009:254). Vygotsky however, emphasises the role culture and social interaction play in the construction of meaning, and this theory is sometimes referred to as radical social constructivism (Lefrancois 2006:259-260).

2.5.1.2 Social constructivism

Vygotsky (Lefrancois 2006:259-260) postulated the theory that learning occurs through the making of meaning based on culture and social interaction. This theory is known as social constructivism. Social constructivism emphasises the role social interaction plays in the development of cognition. This social interaction is facilitated by the application of language. Vygotsky’s (Allen 2005:247-256) notion of the zone of proximal growth (ZPD) holds that “the lecturer learns from and about the child as the child learns because of the lecturer’s actions”. The ZPD is “the child’s potential for development, defined by what the child cannot accomplish alone initially, but is capable of with the help of competent others and can subsequently accomplish alone” (Pritchard 2009:262-266). ZPD development as explained by Vygotsky (Allen 2005:247-256) is the potential developmental gap in a student. The gap is between a student’s actual developmental level as determined by independent problem solving and the
higher level of potential development as determined through problem solving under lecturer guidance or in collaboration with more capable peers.

According to Allen (2005:247-256), the understanding of the notion of ZPD is diverse and based on cultural contexts. In order to facilitate social constructivist learning, the student interacts with his or her instructors and peers in what is referred to as scaffolding. The metaphor of scaffolding was adopted by Wood, Bruner and Ross (Pol, Volman & Beishuizen 2010:271-272) as a way of explaining the temporary support provided to the student to ensure his or her completion of a task. This support may be in the form of modelling and the posing of questions for different subjects. Modelling will be explained in more detail in the theoretical and conceptual section of this chapter.

The principle of scaffolding of students by their instructors and peers is postulated by a number of educational psychologists. Scaffolding is support given to the student by the instructor and the student’s peers, which eventually enables the student to understand concepts that were initially difficult. The notion of scaffolding is advocated by Wood, Bruner and Ross (Robson 2006:32) in order to ensure the successful development of the student. This entails involving the student in culturally meaningful, problem-based, collaborative learning activities. Students from diverse cultural understanding arrive at a shared understanding or solution to the problem through this process. On his or her own, the student can then arrive at an understanding of the tasks. In this regard, the ZPD is the gap between knowledge acquired and understood through means of instruction, and the knowledge that pre-exists in the student. Dalsgaard and Godsk’s (2007:30) definition of social constructivist learning emphasises the active, individual construction of knowledge by the student which occurs in a social environment. Learning is thus actively self-governed by the student.

Dewey and Wertsch (Dalsgaard & Godsk 2007:29-42) and Vygotsky (1978) stress the goal-directed and mediated nature of self-governed activities. A problem represents a goal that cannot immediately be achieved. The mediated nature of activities means that a goal-directed person uses resources (such as physical objects, concepts or theories) to solve a problem. Knowledge is constructed in this goal-directed activity. Consequently, according to this approach, students should be directed towards solving a problem and should direct the problem-solving process themselves
Constructivist learning theories have given rise to a variety of teaching methodologies. Hence different terms are used to refer to constructivist learning, based on various elements that form the core belief system. Such terms include problem-based learning, interactive learning, collaborative learning and active learning. Students are therefore expected to select, interpret and apply knowledge using practical cases and solve complex problems (Jacobson & Mark, Meyers & Jones, Silberman and White in Struyven et al 2006; Tenenbaum, Naidu, Jegede & Austin 2001). Schmidt et al (2009:227-228) regard problem-based learning as being grounded in constructivism. They further describe the introduction of problem-based learning in a medical school in 1969 as avant-garde. They allude to its incorporation in medical schools in the USA, Australia, Europe and Asia. The adoption of problem-based learning has also gone beyond the medical schools in these regions to other disciplines such as economics and business, engineering, psychology, law and the natural sciences (Schmidt et al 2009:227-228). This assertion is corroborated by Barrows and Tamblyn, Bloom, Vernon and Blake (Downing 2001:229-235) and Mennin and Martinez-Burrola (1988), who note that constructivism has been well represented in the health-related disciplines. Al-Fadhli and Khalfan (2009:531) allude to the prominence of constructivist approaches in higher education institutions. Similarly, Hosie, Schiebeci and Backhaus (2005:539-553) indicate that constructivist approaches are considered the ideal pedagogy for online learning.

In line with technological changes, social constructivist learning has infringed on the field of ODL. Su and Beaumont (2010:417-431) report on the successful use of wikis in stimulating social constructivist learning through the promotion of collaborative learning, confidence in the formative self and peer assessment by means of rapid feedback, vicarious learning through observing others contributions and easy navigation and tracking facilities. As earlier indicated, in the fifth generation of distance learning (see table 2.1), users are involved in the production of information and content. Wikis are web based and allow for collaborative learning both synchronously and asynchronously. Similarly, wikis can play a key role in fostering collaborative learning. Students who grew up during the digital age carry out collaborative learning and social interaction in educational settings. These students, referred to as digital natives, are relatively experienced in the use of emerging technologies (Prensky 2010:202-249).
In addition to the impact of the shift in learning paradigms on various disciplines, the researcher noted the impact constructivism has had on various learning support structures. In the field of information science, a core component of learning resources, integrative learning paradigms have led to a change in the information infrastructure and provisions in libraries. The interconnectivity and interdependence of libraries through sociocultural and technical conditions resulting in changes in the library information technology infrastructure and provision of group learning spaces have been supported by integrative learning (Beagle 2010:7-26).

The impact on ODL includes the ideals of open education resources as well as the way in which information is accessed (Siemens & Tittenberger 2009:2-5). Nowadays, students create and exchange information and knowledge both individually and collaboratively owing to the interconnectivity afforded by technological media (Benkler 2006:8-9). In the earlier behaviourist-based distance education programmes, students received information and knowledge from a single source, namely the instructor and had to interpret this information and finally make sense of this single-sourced information. However, in the later forms of distance learning, the students have a myriad of sources from which to access information and knowledge. The student interacts with these multiple sources of content, interprets the information and ultimately makes sense of it (see figure 2.2).

The difference between cognitive constructivism and social constructivism lies in the personal process of the construction of meaning and ideas in the former, and the collaborative processes employed in social constructivism. The unifying strand between the two is that ideas, meaning and learning occur through construction from experience, resulting in personal meaning to the student. Both cognitive and social constructivists argue that a lecturer or instructor is a facilitator of the learning process rather that a dictator. Powell and Kalina (2009) contend that in order for effective learning to take place, both cognitive and social constructivist approaches need to be incorporated into the teaching and learning strategies. Ally (2008:19) maintains that although there has been a move to constructivism, the behaviourist, cognitive and constructivist schools of thought overlap in terms of the ideology and principles. Constructivism evolved from behaviourist learning theories and is widely used as theoretical grounding for the field of education and training.
Constructivism as a learning paradigm formed a part of the theoretical and conceptual framework in the current research. Baviskar et al (2009:543-544) identify four constructivist criteria and emphasise the need to adhere to the four criteria for any teaching and learning to be considered constructivist. The first critical element is the eliciting of prior knowledge. The premise of this element is that all new knowledge is acquired in relation to prior knowledge which the student possesses (Naylor & Keogh, Sewell, Vermette et al, Windschitl & Yager in Baviskar et al 2009:543). This is achieved by either the lecturer’s use of mechanisms to elicit prior knowledge or drawing the student’s attention to his or her prior knowledge. Prior learning may be elicited using techniques such as pre-tests, informal and formal interviews with the students and the concept mapping, enabling the student to present all he or she knows about a topic in the form of a network diagram illustrating the relationships between the nodes (Baviskar et al 2009:543). This criterion is referred to as elaboration by authors such as Pressley and Willoughby et al (Loyens, Rikers & Schmidt 2007:582), who posit that elaboration leads to significant learning gains.
According to Baviskar et al (2009:544), the creation of cognitive dissonance is the second criterion for the stimulation of constructivist learning. Here the student is made aware of the difference between his or her prior and new knowledge.

The third criterion for constructivist learning is the application of the knowledge with feedback. At this stage, the student is required to interpret and modify prior knowledge in the context of new knowledge. Baviskar et al (2009:544) indicate that this criterion may be achieved through the use of quizzes, presentations, group discussions or other activities in which the students compare their individual constructs with those of their cohorts or with their novel situations. This allows the student to check the validity of his or her constructs and to further define the interconnectedness of the new knowledge to a greater variety of contexts. This particular criterion is consistent with the defining characteristic of constructivism as a social and collaborative activity, as noted by Al-Fadhli & Khalfan (2009:531) and others such as Loyens et al (2007:582). This permanently integrates the new knowledge (Baviskar et al 2009:544).

Reflection on learning is the fourth criterion for constructivist learning. On integrating the new knowledge permanently, the student ought to become aware that learning has taken place (Windschitl & Yager in Baviskar et al 2009:544). This may be achieved in two ways. Firstly, reflection on learning can be achieved through traditional assessment methods such as presentations and examinations. Alternatively, meta-cognitive activities such as reflexive papers may be applied. Reflection on learning is also a means of self-regulation on the part of the student which allows him or her to become aware of effective learning strategies and how to use them (Zimmermann & Schunk 2001; Winne in Loyens et al 2007:582).

**2.5.2 Observational learning**

As a further grounding for the current research, observational learning based on Bandura’s (2001:265-299) social cognitive theory was used. According to Bandura (2001:266), human nature is a vast potentiality that can be fashioned from direct and observational experience. In observational learning, a single model can transmit new ways of thinking and behaving simultaneously to countless people in dispersed locales. Social cognitive theory also posits that humans operate in socio-structural networks of which they are products and producers. Human
nature is therefore shaped by direct observable experience through various processes which are intrinsically human – symbolising, self-regulatory, self-reflective and vicarious capabilities.

As asserted by social cognitive theorists, human beings have evolved an advanced capacity for observational learning that enables them to advance their knowledge and skills beyond their fields of experience. Human beings also have the unique ability to use information conveyed by the rich variety of models for all behavioural, cognitive and affective learning. This is achieved through both direct experience and vicariously by observing people’s actions and their consequences for them (Bandura 1986; Rosenthal & Zimmermann in Bandura 2001:271). Much social learning occurs from modelling based on one’s direct realm of existence. However, a vast amount of social learning is gained from modelling in the symbolic environment of mass media (Bandura 2001:271).

According to Stefanone, Lackaff and Rosen (2010:512), modelling refers to the process through which individuals observe others, interpret their behaviour and adjust their own in response. The development of television is viewed by Stefanone et al 2010: 512) as a vital source of behaviour models, enabling people to “transcend the bonds of their immediate social life” (Bandura 1986:55). In comparison to the quantity of information about the world available in daily life, the amount of environment-rich information provided via media is vast. To the extent to which one’s images of reality are mediated and vicarious instead of directly experiential and experimental, the greater the impact of media will be (Bandura 1986). Whereas previously, modelling influences were largely confined to the behaviour patterns exhibited in one’s immediate environment, the accelerated growth of video delivery technologies has vastly expanded the range of models to which members of society are exposed. Because the symbolic environment occupies a major part of people’s everyday lives, much of the social construction of reality and shaping of public consciousness occurs through electronic acculturation (Bandura 2001:271). Modelling has proven to yield better results in the area of training (Bolt et al, Compeau & Higgins, Johnson & Marakas, Simon et al., Simon & Werner in Yi & Davis 2003:147). Modelling is thus a more complex process than mimicry or imitation, and Bandura (2001:273) identifies four specific functions of the process namely, attentional, retention, production and motivational processes, as depicted in figure 2.3.
2.5.2.1 **Attentional processes**

Attentional processes during modelling for observational learning determine what is selectively observed in the profusion of modelling influences and what information is extracted from ongoing modelling events. This is achieved by the person exercising attentiveness when observing events. According to Bandura (2001:272), a number of factors influence what is modelled. He classifies these factors as the modelled events and the observer attributes.

The modelled events have salience, which refers to a pronounced feature or highlight that attracts the attention of the observer. In addition, the events have affective valence, which evokes either positive or negative emotions on the part of the observer. The complexity of events is a characteristic that allows observers to adapt or ignore an event. Prevalence is the level of saturation of the modelling event to the observer. In this regard, the prevalence can impact on attracting the observer’s attention. Accessibility of the modelled event in the realm of the observer also influences the attention the observer focuses on the event. The functional value of modelled events is influential in determining which events will be closely observed and which will be ignored.

There are observer attributes that contribute to the attentional processes in observational learning. The first attribute is that of the perceptual set. The perceptual set refers to a perceptual bias, predisposition or readiness, on the part of the observer, to perceive particular features of a stimulus. The observer attributes also include the cognitive capabilities which are the skills possessed by the learners who observe the modelled activity. Their cognitive skills determine what is modelled in the profusion of activities they are exposed to. In addition to the learners’ cognitive capabilities, their choices are influenced by their preconceptions and the value they place on what they observe. The learner’s level of arousal in observing events also has an impact on his or her modelling of the events. Acquired preferences are observer attributes that influence the attentional processes. Observers bring their own preferences that they have acquired as a result of the positive consequences they have experienced.
2.5.2.2 Retention

Bandura (2001:272) identifies the second major sub-function of modelling for observational learning as retention. Retention involves the active process of transforming and restructuring information conveyed by modelled events into rules and conceptions for memory representation. Retention processes comprise cognitive construction and rehearsal. As with attentional processes, retention requires that the observers of modelled events possess certain attributes.

Cognitive construction during the process of retention is facilitated by symbolic representations of modelled information in memory codes. If one is to reproduce a modelled event, when the event is no longer present to serve as a guide, the event is represented in memory in symbolic form. The codes are then cognitively organised by the observer. Hence actions must be cognitively registered as symbolic representations in one’s memory in order to regulate behaviour (Yi & Davis 2003:147). The second component of retention is cognitive rehearsal of the coded information (Bandura 2001:272). Rehearsal serves as a memory aid for the modelled events. Bandura (2001:272) emphasises that fact that preconceptions and affective states exert biasing influences on these representational activities. He further asserts that recall involves a process of reconstruction instead of the simple retrieval of registered events. During the rehearsal of modelled events, the observer uses cognitive competencies to increase retention. In addition, retention occurs through the enactment of the modelled events. Retention processes require cognitive skills and structures on the part of the observer. In this regard, the observer employs cognitive structuring of the modelled events as a means to achieve retention.

2.5.2.3 Production processes

The third sub-function of modelling for observational learning is the production process. According to Bandura (2001:272), this process involves the translation of symbolic conceptions into appropriate courses of action. This is achieved through a conception-matching process in which conceptions guide the construction and execution of behaviour patterns that are then compared against the conceptual model of adequateness. Bandura (2001:273) identifies
representational guidance and corrective adjustments as activities that occur during the production process.

Representational guidance is achieved through response production by the learner putting forth a given set of responses according to the modelled events. This activity is facilitated by guided enactment and the behaviour is modified on the basis of the comparative information to achieve close correspondence between conception and action. The mechanism for translating cognition into action involves both transformational and generative operations. Execution of a skill must be constantly varied to suit changing circumstances. Adaptive performance therefore requires a generative conception instead of one-to-one mapping between cognitive representation and action. By applying an abstract specification of the activity, people can produce many variations on the skill (Bandura 2001:272). Yi and Davis (2003:147) posit that the retained symbolic memory of actions must be reconverted into overt actions to generate desired responses.

Bandura (2001:273) identifies observer attributes required to effectively conduct production processes as physical capabilities and component sub-skills. Physical capabilities are essential in production processes because an individual may be unable to coordinate various actions in the required pattern and sequence because of physical limitations. In addition, the amount of observational learning an individual may exhibit is dependent upon his or her having the necessary component sub-skills to perform the production process.

2.5.2.4 Motivational processes

The fourth sub-function in modelling for observational learning as identified by Bandura (2001:274) is the motivational process. Social cognitive theory distinguishes between acquisition and performance because people do not always perform everything they learn. Bandura (2001:274) identifies the following three major types of incentive motivators that influence performance: external incentives, vicarious incentives and self-incentives. External incentives are carried by sensory, tangible, social and control avenues. Vicarious incentives drive people to exhibit modelled behaviour if it results in valued outcomes instead of punishment or unrewarding outcomes (Bandura 2001:276). People are motivated by the successes of others who are similar to themselves. Self-incentives, however, drive people to pursue activities that they
find self-satisfying and that give them a sense of worth, but reject those they personally disapprove of (Bandura 2001:274).

The observer needs to possess observer attributes in order to achieve motivation during observational learning. Personal standards of conduct on the part of the observer provide a further source of incentive motivation. The self-approving and self-censoring reaction people generate on their own behaviour regulates which observationally learned activities they are most likely to pursue. The symbolic memory of actions weakens unless the perceived consequences of performing the actions are favourable to cause repeated performance (Yi & Davis 2003:147).
Figure 2.3: The four major sub-functions governing observational learning and the influential factors operating in each sub-function

Source: Bandura (2001:273)
2.6 Conclusion

This chapter provided a literature base for the research by initially placing the research in the context of ODL and its evolution. The evolution of ODL was explored with reference to the generations of distance learning with a focus on the societal, technological and pedagogical developments that helped shape the direction of ODL maturation. The chapter also presented online learning in terms of online learning affordances. The pedagogical possibilities available via online platforms and resources were highlighted by outlining the affordances of these technologies. Prior research was analysed in fields relating to the focus of this research. The first field explored the role of media in learning environments. It was argued that media play a vital role in the creation of instructional systems and learning environments. The effects of learning environments on constructivist learning were then addressed. The research conducted on this focus area was discussed and the different perspective that the current research brought to this knowledge base noted. Research published on online media for constructivist and observational learning was also analysed in order to place the current research in the broader knowledge base.

The second part of the chapter dealt with the theoretical and conceptual framework that guided this research. Constructivism, cognitive constructivism and social constructivism were first explored. The four key components of constructivism as described by Baviskar et al (2009:542-550) were then explained. This was followed by a discussion of the functions of observational learning in relation to social learning theory (Bandura 2001:265-299). Finally, the four components of the functions of observational learning, namely attentional, retention, production and motivational processes were described.

The next chapter deals with the methodology used in this research study, starting with a brief description of the meta-ethnographic methodology. The researcher adopted this method for the first phase of the research.
CHAPTER 3
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The purpose of this chapter is to present the research design and methodology employed to address the research problem and consequent question as well as the objectives of the research. In this research, a qualitative design was used to explore and understand the meaning individuals or groups ascribe to a social or human problem (Creswell 2009:4). The research was conducted in three phases and qualitative methods were employed to meet the research objectives. In explaining each of the phases, the methodology used in each is rationalised. The first phase involved a meta-ethnographic methodology to synthesise previous research theses in order to gain an understanding of the students’ experiences of online media, constructivism and observational learning. To comprehend the essence of the lived experiences, as described by the lecturers, regarding online media blends and learning, the phenomenological research method was applied. On the basis of the findings of the initial phases and existing constructivist learning models, a framework for use in online learning environments was developed. Qualitative research design formed the point of departure for this research project and the philosophical paradigm is explained below. The approaches and procedures used in the phases of this research are also outlined.

3.2 The philosophical paradigm

A philosophical and theoretical framework of a scientific school or discipline within which theories, laws, and generalisations and the experiments performed in support of them are formulated (The Merriam-Webster online dictionary 2012:1). Using this definition of a philosophical paradigm, the research design in this study departed from a social constructivist paradigm, which Crotty (Creswell 2009:8-9) explains as drawing on the following three main assumptions:
(1) Meanings are constructed by human beings as they engage with the world they are interpreting. Qualitative researchers tend to use open-ended questions so that the participants can share their views.

(2) Humans engage with their world and make sense of it based on their historical and social perspectives – we are all born into a world of meaning bestowed upon us by our culture. Thus, qualitative researchers seek to understand the context or setting of the participants through visiting this context and gathering information personally. They also interpret what they find, an interpretation shaped by the researcher’s own experiences and background.

(3) The basic generation of meaning is always social, arising in and out of interaction with a human community. The process of qualitative research is largely inductive, with the inquirer generating meaning from the data collected in the field.

This research departed from this philosophical paradigm because the purpose of the research was to explore constructivism and observational learning in online learning at a mega university. The research could be used to inform policy development in online learning practice in higher education institutions.

Since the research was conducted in three phases, the research methodologies also involved three phases. In the first phase, the researcher sought to synthesise previous research theses in order to gain an understanding of students’ and lecturers’ experiences of online media blends, constructivism and observational learning.

3.3 Ethical considerations in this phenomenological study

The personal nature of phenomenological research usually results in ethical considerations for researchers. In this phenomenological study based on online learning, the ethical considerations were different for the online interviews and the face-to-face interviews. In the online interviews, the participants could be traced via the electronic nature of the answers they had sent to the researcher. She had to consider the privacy of the participants and ways to protect their privacy by employing a number of measures.
The first measure the researcher applied when meeting the participants was to ask them to append their signatures instead of any other identifying markers on their informed consent forms indicating their willingness to participate in the research (see annexure five). In this regard, the lecturer opted not to use downloadable electronic consent forms as used by O’Connor and Madge (Mann & Stewart 2000) because she had physical access to the participants. In addition, her approach ensured a level of authenticity because she was sure that the signed consent forms came from the appropriate participants. The participants were also left with the information sheet (see annexure four). This ensured that the researcher did not have any means of identifying the participants on paper. She verbally asked the participants to attach their narratives as attachments to their emails. Each participant received an individual email with the interview question and not a group email. Hence no participant was able to know who else had participated in the research. In addition, although the researcher employed snowball sampling in gathering the sample, she did not mention who had referred her to the participants as a possible rich data source.

In conducting the face-to-face interviews, the researcher gave the participants the forms as indicated in section 3.3.1.6 and verbally ensured that they understood their rights prior to their signing the consent forms. To protect their identity, the researcher requested them to use their signatures instead of their names in giving their informed consent.

a. Ethical clearance

Before embarking on data collection, ethical clearance was sought for the research study. During the ethical clearance application, the researcher explored all possibilities of harm that could befall the participants as a result of their participation. The issues included physical, emotional or psychological harm or discomfort. The researcher also examined the study for possible negative implications for the participants’ professional and/or personal lives.

The research did not pose any foreseeable physical, emotional or psychological harm. The interview question did not evoke any foreseeable harm and the informed consent form (annexure five) which the researcher went through with the participants and which they signed, made their rights clear. They were given the opportunity to decline to participate at any point during the research. The researcher drew their attention to her contact details on the form, and on her
business card, and informed them verbally that if they had any reservations, required clarity or wished to withdraw from the research they were free to contact her at any time. There were no repercussions in relation to the participants withdrawing from the research. The participants were not in in any way threatened or coerced into participating in the research.

On completion of the interview process, the researcher conducted a telephonic debriefing session with each participant in order undo any harm the research may have had on him or her. The key debriefing interview question in this regard was as follows:

*Did you experience any harm, discomfort or concerns regarding the online interview process?*

The researcher addressed the concerns on a case-by-case basis until all the participants indicated that they had no further concerns or misgivings.

### 3.4 Phase 1: lecturers’ and students’ experiences of online media, constructivism and observational learning: a meta-ethnographic approach

In order to synthesise previous research theses for the purpose of gaining an understanding of the students’ experiences of online media blends, constructivism and observational learning, the meta-ethnographic approach was adopted. Meta-ethnography is a branch of qualitative research synthesis whose focus is on primary ethnographic research. Furthermore, meta-ethnographic research is the synthesis of interpretive research (Noblit & Hare 1988:10). Qualitative research synthesis is described as a means of cultivating the independent mindedness of the true intellectual. Qualitative research synthesis arose from the field of research synthesis of quantitative studies.

Since the objective of the first phase of the research was to synthesise previous research theses in order to gain an understanding of lecturers’ and students’ experiences of online media, constructivism and observational learning, a meta-ethnographic method was deemed suitable. Chapter 4 explains the meta-ethnographic study and the procedures used to perform the synthesis.
3.5 Phase 2: an exploration of lecturers’ experiences of online media and the facilitation of constructivism and observational learning

The second phase of the research emerged from the second research objective, namely to explore the lecturers’ experiences of online media in the facilitation of constructivism and observational learning. The first step entailed addressing the role theory plays in research with a focus on qualitative research. The ontological and epistemological perspective of the researcher giving a concise description and justification for the research methodology employed is addressed. The research paradigm for the study will be addressed and the research design and methodology described in detail.

3.5.1 Phenomenology

Phenomenology is a variant of the qualitative approach and advocates the study of direct human experience, and sees behaviour as being determined by phenomena of experience, and not the external, objective and physically described reality (English & English in Cohen, Manion & Morrison 2005:23). Consistent with this subjective approach, Langdridge (2007:10) defines phenomenology as the study of human experience and the way in which things are perceived as they appear to consciousness. Intentionality is a key feature of consciousness, in particular the way in which internal individual consciousness relates to the exterior world. It is the relationship between one’s inner consciousness and the world that is the focus of phenomenology: the public realm of experience (Langdridge 2007:13). Phenomenology is concerned with the relationship between a person and his or her external world, the relationship between what is experienced and the way in which it is experienced.

The researcher’s reading revealed two main phenomenological stances. The first is transcendental phenomenology, which adopts a “God’s eye view” of lived experiences. This is achieved by the subject of the lived experience stepping outside of the experience and reflecting on the experience. The second is existential phenomenology, which refers to the present “being-in-the-world” lived experience, which is grounded in the subject’s body in relation to the environment in which he or she lives (Langdridge 2007:15-16). In essence, this
The phenomenological stance does not focus on the internal mental processes, but instead on the lived experiences based on the individual and his or her environment. The latter was the approach adopted in this research because the participants’ lived experience of online learning was based on them and their environment. In addition, this research departed from an interpretivist approach which allows for increasingly sensitive awareness of humans and their ways of being-in-the-world (Dreyfus in Streubert & Carpenter 2011:84).

Phenomenology was chosen to study the essences of online learning in an ODL university and the essence of views of academics involved in online facilitation. This study endeavoured to give a direct description of experiences using online learning as the instructional medium as it is currently used in an ODL university in South Africa, without causal explanation of the phenomenon. This study used the phenomenological interview as the primary method of data collection, and the researcher attempted to uncover the essence and meanings of online facilitator’s experiences. Prior to interviewing others, the researcher explored her own experiences as part of the process to become aware of her own prejudices, viewpoints and assumptions of online and technology enhanced learning. These assumptions were bracketed and set aside as a way of preventing her from influencing the process of data collection and analysis.

3.5.1.1 Bracketing

Bracketing is the process of “epoche”, which allows the experience of the phenomenon to be explained in terms of its own meaning and not to impose one’s own views on the data. The researcher therefore wrote a narrative of her views and experiences of online learning, pedagogy and online media:

I am a 48-year-old African female and all the professional qualifications I hold are in the field of education and training. My views are greatly influenced by my own learning experiences as a student, a teacher, a tutor, a lecturer an academic and a researcher.

My earliest foundations of schooling right up to my honours programme were from a behaviourist pedagogy. I was exposed to the theories of learning and the various diverse
learning profiles that exist in the classroom, but my learning experience (from teaching and learning to assessment) all took the form of behaviourist approaches, the teacher as the centre of knowledge and the student as the receptacles for knowledge. My assessment consisted of regurgitating notes and handouts given by the instructors.

On embarking on my master’s programme, my reading exposed cognitive, affective and psychomotor learning domains to me. At the same time I was a tutor at a small university campus. In spite of knowing the benefits of the various learning domains, my intellectual knowledge did not affect my teaching practices. My master’s programme piqued my interest in computer-based teaching and learning, and as such my dissertation focused on computer-based teaching and learning in a disadvantaged South African context. My master’s programme was completed in 2003.

My epiphany in learning came with my first experience of Web 2.0 technologies for educational purposes when I was employed at a university in 2007. This opened up a new world of possibilities that was both exciting and somewhat mind boggling to me. On embarking on my doctoral studies, my views on pedagogy in the digitised environment changed and I began to view learning as a social activity which can be well facilitated by online social media. I no longer see an instructor as a reservoir of all knowledge and I appreciate the possibility of the non-hierarchical generation of knowledge.

While I subscribe to the view that learning ought to be guided for the purposes of management and assessment, I also hold the view that the constraints on the learning paths that currently exist in many higher educational institutions need to be relaxed.

With regard to online technologies that best facilitate learning in higher education, my views are informed by my reading on online learning and pedagogy and not by practice. I am of the opinion that online social media that best facilitate learning are those that allow for synchronous communication between the students and their peers and the instructors.

Prior to embarking on data collection, the researcher also employed a reflexive exercise. Reflexivity is a means of ensuring rigour and trustworthiness of the findings of qualitative research. It is the acknowledgement of reflection on the ways in which the researcher’s interview questions and methods and her own subjective position may impact on the knowledge produced.
in the research study. She thus used a tool comprising a set of questions to minimise this threat (see table 3.1). This reflexive exercise was conducted prior to embarking on the research, during data collection and one completion of the study prior to writing it up. This exercise helped the researcher to amend the interview questions in the light of reflections on the reflexive issues (Langdridge 2007:59).

Table 3.1: Questions to encourage a reflexive approach to research and the researcher’s reflections

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Why am I conducting this research?</td>
</tr>
<tr>
<td></td>
<td><em>I am conducting this research to explore the Unisa lecturers’ lived experiences of online media for observational learning.</em></td>
</tr>
<tr>
<td>2.</td>
<td>What do I hope to achieve with this research?</td>
</tr>
<tr>
<td></td>
<td><em>I hope to gain insight into the lecturers’ lived experiences of online media for observational learning.</em></td>
</tr>
<tr>
<td>3.</td>
<td>What is my relationship to the topic being investigated?</td>
</tr>
<tr>
<td></td>
<td>– Am I an insider or outsider?</td>
</tr>
<tr>
<td></td>
<td><em>I am an outsider as I have never taken an online course or facilitated an online course.</em></td>
</tr>
<tr>
<td></td>
<td>– Do I empathise with the participants and their experience?</td>
</tr>
<tr>
<td></td>
<td><em>No, I do not.</em></td>
</tr>
<tr>
<td>4.</td>
<td>Who am I and how might I influence the research I am conducting in terms of age, sex, class, ethnicity, sexuality, disability and any other relevant cultural, political or social factors?</td>
</tr>
<tr>
<td></td>
<td><em>I am a 48-year-old, black, senior researcher and I do not speak any of the local languages other than English. As the interviews will be via email, my background may not influence the participants’ responses.</em></td>
</tr>
</tbody>
</table>
5. How do I feel about the work?
   
   – Are there external pressures influencing work?

*I have conducted a meta-ethnographic study on online learning, constructivism and observational learning. As such the context of the meta-ethnographic study was different.*

6. How might the outside world influence the presentation of findings?

*There is no foreseen influence on the presentation of the findings from the outside world.*

7. How might the findings impact on the participants?
   
   – Might they lead to harm and, if so, how can I justify this happening?

*The findings may positively impact on the lecturers' instructional methods.*

8. How might my findings impact on the discipline and my career in it?
   
   – Might they lead to personal problems, and how prepared am I to deal with these should they arise?

*The findings may shed light on best practice guidelines for online learning and lead to further research.*

9. How might the findings impact on wider understanding of the topic?
   
   – How might my colleagues respond to the research?

*My research may lead to my recognition and professional growth.*
   
   – What would the newspapers make of the research?
   
   – Does the research have any implications for future funding (of similar research and/or related organisations)

*Source:* Adapted from Langdridge (2007:59)
3.5.1.2  **Pre-testing of data collection process**

On completion of the bracketing process described in section 3.4.1.1, the researcher embarked on the pre-testing of the interview process. In this regard, the researcher utilized guidelines as stipulated by Chenail (1009:14-21). The researcher played the role of the interviewer and participant. She recorded the interview and reviewed the content to see what information was generated via the questions.

To begin this process the researcher, who was also the interviewer and participant of the pre-test, developed a series of open ended questions that she planned to use to conduct the interviews. A space for conducting the interview was selected and the recording device prepared. She then reviewed the consent form in order to check for any unclear or confusing text. The researcher signed the form when she was satisfied with the clarity of its contents and its format. The researcher than read and answered the interview question. On completion of the interview, she reflected on the proceedings. Minor changes were done on the interview questions based on the pre-testing process.

3.5.1.3  **Population**

The population for this phase of data collection consisted of all lecturers involved in the teaching and learning of online courses at Unisa.

3.5.1.4  **Sampling**

In order to explore the staff’s lived experiences of online media and constructivist and observational learning, the sample of participants was based on current staff engaged in online learning courses at Unisa. The sampling method used was purposive sampling where the participants shared the experience of teaching in an online environment (Langdridge 2007:58). The precise method of sampling used was purposive and homogenous. Participants were recruited who shared the experience at the heart of the investigation and did not vary significantly across demographic characteristics (Langdridge 2007:58). Of interest to the researcher was the shared experience of the participants as lecturers engaged in offering online
learning programmes at Unisa. This phase of the research explored the lecturers’ views of online media and observational learning, and the sample of participants was based on current lecturers engaged in online learning programmes at Unisa.

Snowball sampling was the approach employed. The precise procedure is outlined by Terre Blanche, Durrheim & Painter (2011:139). On receiving ethical clearance (see annexure one) and permission from Unisa to collect data from lecturers at Unisa (see annexure three), the researcher began the sampling procedure by approaching the Head: Research and Graduate Studies to gain insight into the lecturers involved in facilitation of online courses. The researcher was given the name of one lecturer who was seen to be a rich source of information. She made contact and met this lecturer. During the initial meeting with the lecturer, the researcher introduced herself and gave the lecturer an overview of the research, including the research title, the objectives, the research question, the data collection procedure and ethical considerations. The researcher asked her if she would be willing to participate in the research. On receiving verbal consent from the lecturer, the researcher gave her the participation information form (see annexure four) and the informed consent form (see annexure five) and asked her to sign the consent form if she was satisfied and interested in participating in the research. On receipt of the signed consent form, the researcher informed the participant that she would email the interview question to her. This was the start of the data collection process. On conclusion of the interview, the researcher used snowball sampling by asking the lecturer if she knew any other lecturer who facilitated online learning. The researcher contacted the second and subsequent participants, using the same procedures described above. Snowball sampling was chosen because of the use of online applications at Unisa is mainly limited to administrative tasks rather than pedagogical uses. This is consistent with the method of Christie and Garrote Jurado (2009:277). Since lecturers using online learning for pedagogical reasons are difficult to locate, the researcher opted for snowball sampling (Babbie 2008:205). According to Starks and Trinidad (2007:1375), the size of the sample in phenomenological studies is determined by the number of individuals who can provide detailed accounts of their experience of the phenomenon in order to uncover its core elements. The sample size was thus determined by the attainment of data saturation. On employing snowball sampling, data saturation was achieved after the sixth emailed narrative account. The sample for the data collected by means of online interviews consisted of six lecturers.
3.5.1.5  **Data collection**

During this particular phase of data collection, two methods were used to gather data. The first was the online semi-structured interviews and the second face-to-face interviews. This phase of the research used a qualitative approach, the data collection occurred by means of email allowing for asynchronous communication between the interviewer and the participant and by face-to-face synchronous communication with additional participants. The following section (3.4.1.5) describes the online interview method used, followed by an explanation of the face-to-face interview method employed.

3.5.1.6  **The online interview process**

In this phase of the research, email was used as a tool for conducting the interviews in order to collect data, thus allowing the participant to articulate as much detail about the experience as possible (Langdridge 2007:110). In this instance, there was rupture between the participant and the researcher. The email allowed participants in the research to write their own lived experiences of online media blends, constructivist learning and observational learning using their own descriptive terms and reflect on their writing prior to submitting their comments online. The researcher’s choice of online interviews was informed by the benefits it affords the research. In particular, online interviews allowed geographically dispersed participants to participate in the research (as noted by Madge & O’Connor [sa]). The participants were also able to express themselves because the interview did not take the form of a face-to-face focus group where the most vocal or overbearing participant is able to dominate the discussion. In order to overcome possible fears of their comments being freely available on the public internet domain, as in the study conducted by Sharma (2010:132), the researcher secured the question and responses by means of a name and password.

Prior to data collection, the participants received the informed consent form (see annexure five) accompanied by the request for a response within five days via email (Mann & Stewart 2000:10). During this time, the researcher introduced herself to participants by providing a brief oral biography, thus creating a personal relationship with them (Curasi 2001:373). This was followed
up with a telephone call to the participants three days later to remind the participants of the email and request them to sign the consent form if they were interested in participating in the research. On receiving the signed consent forms from the participants, the researcher then sent each of them the password to allow them to participate confidentially in the research, and a brief online orientation guide to assist them with the submission of their accounts.

The interview question sent to the lecturers was as follows:

*Would you please give me a written account from your own lived experiences of which online media applications contribute most to teaching, and how they contribute to your teaching?*

The question was linked to the functions of observational learning based on constructivism and social cognitive theory (Bandura 2001:266)

Throughout the interview process, the researcher performed participant validation in cases where the written accounts were unclear or had multiple connotations. The researcher concluded the interview by thanking the participants for participating in the research:

*This concludes the online interview and I would like to thank you for your participation in this research project.*

**3.5.1.7 The face-to-face interview procedure**

All the interviews were conducted by the researcher in person at a place convenient for the participants. The interviews were face to face. Snowball sampling was used to access data-rich participants. In this instance, the criterion used was the inclusion of lecturers who were involved in the facilitation of online courses at Unisa.

Prior to conducting the first interview, the researcher presented the participant with her ethical clearance certificate (annexure one), the permission to conduct research using Unisa staff and students (annexure three), the participant information form (annexure four) and the informed consent form (annexure five). The researcher afforded the participants an opportunity to ask any questions about her research and explained their rights to them prior to starting the interview process. The interview question was as follows:
Would you please express your experiences of online media applications and teaching?

The researcher used probes relating to constructivism and the functions of observational learning where necessary throughout the interview process. She also performed ongoing member checking to ensure that she had a clear perspective of the experiences of the participants.

On concluding the interview process, in accordance with snowball sampling, the researcher requested the participant to give her the names of possible information-rich sources. This process continued until she had achieved data saturation. Six lecturers were interviewed during this stage. Adequate time was allocated to each interview to prevent any time constraints. The interviews were an hour in length. Each interview was recorded on a data recorder and transferred to the researcher’s computer and then transcribed into text in an MsWord document.

At the end of each interview, the participant was thanked and afforded the opportunity to check the transcribed interview and rectify any incorrect transcription. Also, a second researcher checked the transcriptions for clarity and accuracy. Minimal changes were made on the basis of the second researcher’s input.

3.5.1.8 Data analysis

The data collected during the second phase of the research was in the form of text and oral recordings. Prior to data analysis, the oral recordings were transcribed into text format. The data were verbatim accounts of the participants’ experiences. The collected data were analysed by means of interpretive phenomenological analysis (IPA). In this research, the theoretical concerns emanated from the theoretical and conceptual framework in which the research was grounded. The researcher used interpretive phenomenological analysis as a technique for analysing the data collected. She read through all the written and transcribed accounts to get a sense of the whole and to formulate her thoughts on its meaning for further analysis. Struebert and Carpenter (2011:85) refer to this as naïve reading. The researcher documented the initial impressions of the text.

The methodological interpretations of Van Manen (Streubert and Carpenter 2011) were used by first engaging in the investigation by exploring the phenomenon of online learning in an ODL
university in South Africa. The researcher started the process of enquiry by using her personal experiences as the point of departure. She used bracketing and wrote her own experiences of online learning. She also reflected on online learning by putting questions to herself and generating answers to each question.

3.5.1.9 Developing a situated meaning structure for the lived experiences of the usage of media blends in online learning

Before the data analysis was conducted, it was necessary to get a sense of the whole in the context. The researcher listened to each interview and then read it two to three times before conducting the data analysis. She then loaded the transcripts on to the ATLAS.ti computer program and started identifying meaning units (nodes). See annexure ten for the list of nodes.

The researcher continued the phenomenological journey by searching for idiomatic phrases in the data. She identified descriptions from the participants which she referred to as quotations that were coded and captured on ATLAS.ti. At this point, she examined meaning units for relevancy to the exploration of the usage of media blends in online learning (see annexure eleven).

The researcher moved between the data and the literature to ensure consistency – that is, to check her results with other researchers in the field of online learning and to ensure that the results were consistent and dependable. She also kept notes in the form of an audit trail of what she had done. Each meaning unit was renamed to capture the words and meaning of the participants.

The next step in the data analysis was to translate the naïve words of the participants into social learning and constructivist learning terms of what media blend usage were in online learning. The participants’ responses were examined in order to understand the meaning. These meanings were translated into the terminology of social learning and constructivist learning theories. This process involved moving back and forth from the data to the meanings and frameworks guiding the research. The researcher then tested the derived meanings against the raw data to determine whether the themes were supported by the data and quotations from the transcripts. This movement from concrete data to theory and participant quotations produced articulate meanings.
Thematic analysis was used, which involves a focus on repeated words and phrases in the participants’ answers. Codes, quotations and metaphors by participants were identified and captured on ATLAS.ti. Themes were constructed by clustering together the codes and quotations that which belonged together. The researcher ranked the interpretive themes in order of importance by grouping emerging themes and subthemes together. She identified explicative themes that had a primary referential character by using the framework and her own bracketing document and then I wrote a creative story embodying the experiences of the facilitators of online learning at an ODL university. Constructivism and social learning as the conceptual framework guided the data analysis.

3.5.1.10 Rigour of the research

In order to ensure rigour in the phenomenological phase of the study, the researcher employed various techniques. Firstly, reflexive exercises were performed by noting her own subjective position and using a reflexive tool (see table 3.2) in order to acknowledge and reflect on the ways in which my interview questions and methods and her own subjective position could have impacted on the knowledge produced in the research study. Secondly, she used member checking throughout the interview process. Although the data were in textual format, the researcher verified the accuracy of her interpretation of the participants’ written and verbal accounts both during and after the interviews. In addition, she enhanced the accuracy of her analysis through peer debriefing by identifying a peer to ask questions about the study from their perspective.

3.6 Phase 3: developing a framework based on constructivism and observational learning for use in online learning environments

The third phase of this research entailed the adaptation of the framework for observational learning based on Bandura’s (2001:265-299) social cognitive theory. In this regard, the researcher incorporated the findings from the meta-ethnographic study which she had conducted in the first phase of the research and the findings from the second phase. She subsequently
modified the framework for observational learning based on social cognitive theory (Bandura 2001:265-299)

3.7 Conclusion

The research was conducted in three phases. In the first phase, the researcher undertook a meta-ethnographic study as a means of synthesising previous research theses in order to gain an understanding of the lecturers’ and students’ experiences of online media, constructivism and observational learning. In the second phase of the research, she conducted a phenomenological study in order to explore the students’ and lecturers’ experiences of online media, constructivism and observational learning. The data collection instrument used was a semi-structured interview. The third and final phase of the research consisted of incorporating the findings from the first two phases into a framework for online learning, based on the framework for observational learning grounded in social cognitive theory (Bandura 2001:265-299). Chapter 4 deals with the meta-ethnographic study and the findings from the first phase of data collection for the research.
CHAPTER 4

LECTURERS’ AND STUDENTS’ EXPERIENCES OF ONLINE MEDIA, CONSTRUCTIVISM AND OBSERVATIONAL LEARNING: A META-ETHOGRAPHIC STUDY

4.1 Introduction

Meta-ethnography is a means of synthesising qualitative research which is not necessarily in the form of ethnographies (Britten, Campbell, Pope, Donovan, Morgan & Pill 2002:209-210). Meta-ethnography was the methodology used in the first phase of this research. The researcher therefore sourced data in the form of theses based on primary research focusing on online learning and online media. In this regard, the purpose of this meta-ethnographic study was to synthesise previous research theses in order to gain an understanding of students’ experiences of online media, constructivism and observational learning. The researcher used the components of constructivism and observational learning as the frameworks for this study. The procedures employed were those prescribed by Noblit and Hare (1988:26-29). This chapter provides a description of the meta-ethnographic study of students’ and lecturers’ experiences of online learning.

4.2 Meta-ethnographic research method

‘Re-examining what the thundering herd has left behind’ Fuller (2005:2)

Meta-ethnography is a method of synthesis of published works on a specific topic and can be regarded as a complete study in itself. The focus of meta-ethnographic studies is restricted to a certain factor or phenomenon. In this study, the synthesis was of online media for constructivism and observational learning.
4.2.1 Procedures followed in the meta-ethnographic phase

The intention of meta-ethnography is not to aggregate previous ethnographic studies but rather to synthesise and interpret qualitative studies as a translation of studies into one another in order to understand and transfer ideas, concepts and metaphors across the studies. Meta-ethnographic work emphasises the preservation of meaning. In this study, the meaning was that of constructivist and observational learning using online media. The procedures followed in conducting the meta-ethnography were those prescribed by Noblit and Hare (1988:26-29). For the purpose of this study, the metaphors were referred to as themes, and the second-order interpretations as subthemes.

Noblit and Hare (1988:26-29) identify seven distinct steps or phases that should be followed when conducting meta-ethnographies. The first phase is that of getting started and the second, identifying what is relevant to the research interest. The third phase involves reading the relevant studies. The fourth phase entails determining how the studies are related. In the fifth phase, the studies are translated into each other. The sixth phase of the meta-ethnographic synthesis involves structuring the lines of argument synthesis and, finally, the expression of the synthesis. The seven phases will be explained in detail below.

**Phase 1: Getting started**

According to Noblit and Hare (1988:26-29), this initial step of the meta-ethnographic method entails identifying the interest of the research. In the current study, the interest of the research was drawn from the problem statement, the research question and the research objectives. The specific objective that the meta-ethnographic method addressed was the need to gain an understanding of students’ experiences of the use of online media blends, constructivism and observational learning. This part of the meta-ethnographic approach involved conducting a library search in order to access the data. The request for a library search consisted of research theses produced nationally and internationally in the last ten years. The key terms used in the search were as follows: constructivism; online media blends; experiences of students;
observational learning (see annexure two). The search was conducted on 26 September 2011 and yielded 346 theses and dissertations.

The data search provided a variety of works from South African and international institutions. The search was conducted by the Unisa search librarians. The Nexus (National Research Foundation) database, which provided information on current and completed South African research projects (master’s dissertations and doctoral theses) and the Unisa Research Database: Unisa Institutional Repository (a digital collection of the research and intellectual output of the Unisa community) were used to access the data because the researcher was interested in research studies on online learning only. Furthermore, the International Research Database: Dissertations and Theses (academic research from around the world) was used to access international data on online learning research studies.

**Phase 2: Deciding what is relevant to the initial interest**

The relevant theses and dissertations were identified using five guidelines. In this regard, the researcher compiled a list of inclusion and exclusion criteria to help her locate data for the meta-ethnography. The inclusion and exclusion criteria are explained in the next subsection.

**Inclusion and exclusion criteria**

The relevant theses and dissertations were identified using four criteria. The first criterion involves what is credible and of interest to the focus of the research. According to Noblit and Hare (1988:26), in this part of the research, the researcher should keep the research focus and interest in mind. In this study, the interest of the research was the exploration of online media applications that had led to constructivist and observational learning in online learning environments. The keywords of constructivism, observational learning and online media were used to conduct the search. The search yielded 346 theses and dissertations.

The second criterion for selecting sources for the meta-ethnography was the inclusion of only completed primary research in the form of a research dissertation or thesis in English. The selected sources addressed students’ experiences of online media and learning. The third
criterion was the inclusion of theses and dissertations based on research conducted between 2001 and 2011. Data based on research prior to 2001 and after 2011 were not included. The abstracts of the remaining articles were read to determine which of the research designs departed from a qualitative research approach, which constituted the fourth inclusion criterion. The remaining four articles that are based on qualitative designs appear in table 4.1. The selected articles were subjected to the subsequent meta-ethnographic procedures as indicated by Noblit and Hare (1988:28-29). Table 4.1 below indicates the inclusion and exclusion criteria explained above.

### Table 4.1: Inclusion and exclusion processes and number of theses and dissertations set aside

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Number of theses and dissertations</th>
<th>Number that did not meet the criteria</th>
<th>Number that met the criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credible and of interest to the focus of the research</td>
<td>346</td>
<td>202</td>
<td>144</td>
</tr>
<tr>
<td>Completed primary research in the form of a research dissertation or thesis in English</td>
<td>144</td>
<td>80</td>
<td>64</td>
</tr>
<tr>
<td>Theses and dissertations based on research conducted between 2001 and 2011</td>
<td>64</td>
<td>17</td>
<td>47</td>
</tr>
<tr>
<td>Qualitative theses and dissertations</td>
<td>47</td>
<td>43</td>
<td>4</td>
</tr>
</tbody>
</table>

The researcher reviewed the quality of the data included in this meta-ethnography. She used the quality assessment tool described by Atkins et al (2008:21) as a guide to review components of quality importance in the data. See table 4.2 below for the quality criteria. Four theses reported on the qualitative methodology used in the study and included one phenomenological and three case studies. To ensure rigour in the meta-ethnography, the researcher decided to ask another researcher in ODL to verify the quality criteria and her application of them.

Most of the studies reviewed did not clearly describe the method of data analysis and the researcher therefore decided against including them in this meta-ethnography. It became clear that the rigour and quality had an effect on the contribution of research conducted on online
learning owing to the fact that the researcher could not include a large number of studies because of problems with rigour.

This meta-ethnography might draw attention to researchers in ODL and online learning to focus attention on quality considerations in reporting on their research. The reason for the lack of rigour in the current research databases was not clear, but it could point in the direction of the current lack of research articles addressing online learning in peer-reviewed and scholarly academic journals. No research study from Unisa could be included in this meta-ethnography because of the shortage of studies focusing on online learning, constructivism and observational learning, as well the paucity of studies adhering to the inclusion criteria (see table 4.1). For the purpose of this meta-ethnography, the researcher included only dissertations and theses and not published articles, as indicated in table 4.3.

Table 4.2: Quality criteria for the studies included in the meta-ethnography

<table>
<thead>
<tr>
<th>No.</th>
<th>Question/criterion</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the study qualitative research?</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Are the research question/s clearly stated?</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Did the researcher/s justify his/her/their qualitative research approach?</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Was the qualitative research approach appropriate for the study?</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Did the researchers describe the context of the study?</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Was there a description of the sampling method?</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>Was the sampling method appropriate for the study?</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Regarding the rigour of the study, was there clear description of the audit trail?</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>What was the method of data analysis and rigour description of the study?</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Were the conclusions clearly stated?</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Noblit & Hare (1988)
After determining the theses and dissertations relevant to her research, the researcher decided to include four theses, the details of which appear in table 4.3 below.
Table 4.3: Theses and dissertations that met all the inclusion criteria and included in the meta-ethnography

<table>
<thead>
<tr>
<th>No.</th>
<th>Theses and dissertations</th>
</tr>
</thead>
</table>
The researcher then started synthesising the selected data for the meta-ethnography. The details of the procedures followed and the findings appear in chapter 5. In the next section, the procedures followed in the second phase of the research are outlined.

**Phase 3:  Reading the studies**

On narrowing down to four the literature involving qualitative theses, after employing the inclusion and exclusion criteria and the quality criteria, the researcher proceeded to read through the theses in order to generate the emergent themes in each (Noblit & Hare 1988:28). The specific objective was to synthesise previous research theses in order to gain insight into lecturers’ and students’ experiences of online social media blends, constructivism and observational learning. The researcher read through each thesis more than once in order to get a sense of the data. After reading the data to the point of getting a feel for it, the researcher started generating the themes as they related to the focus of her study. ATLAS.ti software for qualitative data analysis, management and model building was used for this purpose.

**Phase 4:  Determining how the studies are related**

This section reports on the recurrence of themes and subthemes generated from the theses. As is characteristic of meta-ethnographic studies, the researcher drew analogies from the interpretations of the individual texts, recognising the multi-perspectival realities of the multiple narratives. She translated the various perspectives into her own substantive interest (Noblit & Hare 1988:31-32). The translations drawn from the multi-perspectival raw data were represented as the second-order interpretations. As the researcher read through the raw data, she generated emergent subthemes, which she proceeded to classify into larger categories based on the similarity of the interpretations. At this stage, the larger categories were classified as themes (see tables 4.1, 4.2, 4.3, 4.4 and 4.5). In order to determine how the studies were related, the researcher read the data and generated themes arising from the different theses. The most prominent theme, that is, improved learning, was named. This was followed by collaboration, discussion boards, email and learning, access, feedback and reciprocal learning. Figure 4.1 below provides a representation of the themes generated in relation to the subthemes.
4.3 Themes that emerged from the meta-ethnography

Six main themes emerged from the data, namely improved learning, collaboration, discussion boards, emails and learning, access, feedback and reciprocal learning. The presence of the various themes were plotted on a pie chart and appear in figure 4.1. It became clear that the theme on discussion boards was the most comprehensive theme because it addressed online media as such. Improved learning as a theme was referred to by all the researchers and the connection between technology and improved learning was evident.

Collaboration via technology was widely researched and discussed in the data. Emails, access to technology and learning, feedback and reciprocal learning were all researchable elements as demonstrated in this study. These smaller themes were discussed from a number of viewpoints of which technology as a driver for interactive teaching and learning seemed to be the common thread through this meta-ethnography. A second researcher in ODL reviewed the researcher’s themes and subthemes for validity, and minimal changes were made accordingly.

Figure 4.1: Themes generated from the data during the meta-ethnography

Figure 4.1: Themes generated from the data during the meta-ethnography
4.3.1 Improved learning

Improved learning as a theme meant that online learning fostered improved learning among the students. Improved learning was generated from the second-order interpretation subthemes of improved learning outcomes through the use of technology. This particular subtheme emerged throughout the synthesised data. The second most prominent subtheme which was placed under the theme of improved learning was that of active learning. The synthesised data revealed that active learning led to improved learning in the studies.

Active learning as a subtheme emerged from the data. Active learning revealed that students were active participants in the learning process and this resulted in improved learning. The third most prominent subtheme which was related to the theme of improved learning was motivation. Motivation as a subtheme occurred a number of times throughout the data. In this instance, motivation was linked to improved learning outcomes. Additional subthemes associated with improved learning appear in table 4.4 and annexure six.

Table 4.4: Improved learning and subthemes identified during the determination of how the studies were related

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved learning</td>
<td>• Improved learning outcomes with technology</td>
</tr>
<tr>
<td></td>
<td>• Active learning</td>
</tr>
<tr>
<td></td>
<td>• Motivation</td>
</tr>
<tr>
<td></td>
<td>• Technology as blended learning</td>
</tr>
<tr>
<td></td>
<td>• Culture of learning</td>
</tr>
<tr>
<td></td>
<td>• Technology for administrative tasks</td>
</tr>
</tbody>
</table>
4.3.2 Collaboration

Collaboration was the second largest theme in all four of the studies. The prominent subtheme generated was collaboration enhanced by technology, which featured across the raw data. The second most prominent subtheme was that of collaboration and multiple intelligence. This interpretation emerged a few times throughout the studies and meant that collaboration accommodated a variety of learning styles. Collaboration through online discussions featured thrice, as did collaboration and reciprocal learning. Collaboration through online discussions refers to collaboration promoted by online discussions. Collaboration and reciprocal learning means that through collaboration, students and instructors enjoyed the learning experience. The reduction of stress and the forging of friendships through online collaboration were also generated thrice during the second-order interpretation. The findings associated with the theme of collaboration appear in table 4.5 and annexure seven.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Subthemes</th>
</tr>
</thead>
</table>
| Collaboration | • Collaboration  
| | • Collaboration and multiple intelligence  
| | • Collaboration through online discussions  
| | • Collaboration reduced stress and forged friendships  
| | • Collaboration and reciprocal learning  
| | • Collaboration encouraged participation  
| | • Collaboration for moral support and assessment  
| | • Collaboration and reflection  
| | • Collaboration leads to life-like experiences  
| | • Collaborative learning  
| | • Collaboration reduced isolation |
4.3.3 Discussion boards

The third largest theme from the meta-ethnographic study was that of discussion boards. The theme of discussion boards was the first to address online media. Since discussion boards featured prominently in the data, subthemes were ascribed to the theme. The largest subtheme was discussion boards which encouraged constructivist learning. This theme is addressed in more detail later in this chapter. The second most prominent subtheme was discussion boards facilitating collaboration. Similarly, discussion boards facilitating discussion among students occurred twice. Discussion boards as a theme appear in table 4.6 and annexure seven.

Table 4.6: Discussion boards and subthemes identified during the determination of how the studies were related

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion boards</td>
<td>• Discussion boards encouraged constructivist learning</td>
</tr>
<tr>
<td></td>
<td>• Discussion boards facilitated collaboration</td>
</tr>
<tr>
<td></td>
<td>• Discussion boards facilitated discussion among the students</td>
</tr>
<tr>
<td></td>
<td>• Discussion boards facilitated communication between students</td>
</tr>
<tr>
<td></td>
<td>• Discussion boards facilitated active engagement from the students</td>
</tr>
<tr>
<td></td>
<td>• Discussion boards and multiple intelligence</td>
</tr>
</tbody>
</table>
4.3.4 Email and learning

Email and learning were the second theme that addressed online media. The researcher associated three subthemes with this theme. All the subthemes had equal weight in the data. The first subtheme was email for the clarification of concepts and not for higher-level thinking. The second subtheme was that email was comfortable for internal communication. Finally, the third subtheme was email for engaging with content. The theme and subthemes associated with it are depicted in table 4.7 and annexure nine.

Table 4.7: Emails and subthemes identified while determining how the studies were related

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email and learning</td>
<td>• Email for clarification of concepts and not for higher-level thinking</td>
</tr>
<tr>
<td></td>
<td>• Email was comfortable for informal communication</td>
</tr>
<tr>
<td></td>
<td>• Email for engaging with content</td>
</tr>
</tbody>
</table>

4.3.5 Additional themes

Throughout the studies, the researcher also identified three themes that had no subthemes that could be associated with them. The most prominent stand-alone theme that featured a number of times throughout the data was that of unlimited access to technology improving teaching and learning experiences. The second theme was that of technology facilitating reciprocal learning between the students and the teachers. The final one was that of feedback, which was facilitated by technology and was essential for teaching and learning. The three stand-alone themes are indicated in table 4.8.
Table 4.8: Prominent stand-alone themes with the number of times they appeared

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of times the theme featured in the data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlimited access to technology improved</td>
<td>23</td>
</tr>
<tr>
<td>teaching and learning</td>
<td></td>
</tr>
<tr>
<td>Technology facilitated reciprocal learning</td>
<td>13</td>
</tr>
<tr>
<td>Technology allowing for feedback was essential</td>
<td>7</td>
</tr>
<tr>
<td>to teaching and learning</td>
<td></td>
</tr>
</tbody>
</table>

**Phase 5: Translating the studies into each other**

Translation of the studies involved treating each study as an analogy. In addition, the translations protect the particular, respect holism and make comparisons between the studies possible (Noblit & Hare 1988:28). In this part of the meta-ethnographic process, the researcher constructed a grid with each thesis appearing in a separate column (table 4.9). In an attempt to retain the holist nature of each thesis, exact quotations from the data were used and inserted in the finding cells of the grid (Britten et al 2002:211). The researcher also identified the findings in the theses in relation to constructive criteria (Baviskar et al 2009:543-544) and observational learning (Bandura 2001:271).
Table 4.9: Meanings of the use of online media in online learning from the meta-ethnography

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
<td>20 participants (students)</td>
<td>13 participants</td>
<td>Two focus groups</td>
<td>13 participants</td>
</tr>
<tr>
<td>Setting</td>
<td>Rural North-West Community College, USA</td>
<td>University of Pittsburgh, USA</td>
<td>Florida county, USA</td>
<td>Colleges and universities in the USA</td>
</tr>
<tr>
<td>Methodology</td>
<td>Case study</td>
<td>Case study</td>
<td>Case study</td>
<td>Phenomenology</td>
</tr>
<tr>
<td>Data collection method</td>
<td>Interviews, document analysis</td>
<td>One-on-one interviews, focus groups, observation</td>
<td>Focus group interviews</td>
<td>Interviews</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key findings in relation to constructivism</th>
<th>Prior learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The discussion board shaped the learning community and became the central gathering place for learner-learner and teacher-learner socialisation</strong> (Boster 2009:124)</td>
<td><strong>Students discuss the (course) contents in terms of their professional experience making their learning more meaningful</strong> (DeArment 2002:209)</td>
</tr>
<tr>
<td><strong>Online experiences can be enriched through discussion board interaction and cohorts that develop among students taking a common sequence</strong></td>
<td><strong>Access to multimedia products on the internet provides additional opportunities for students to learn from virtual instructors, guides and experts</strong> (Menard 2010:142)</td>
</tr>
<tr>
<td><strong>Students used existing knowledge and life experiences</strong> (Menard</td>
<td><strong>Students used existing knowledge and life experiences</strong> (Menard</td>
</tr>
<tr>
<td>Cognitive dissonance</td>
<td>of courses (Boster 2009:125)</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td></td>
<td>• As students compared their assignments they were able to gauge their academic position (Boster 2009:131)</td>
</tr>
<tr>
<td></td>
<td>• The discussion board is an important resource where</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Application with feedback</td>
<td>students socialise, collaborate, offer support and learn from one another (Boster 2009:126)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Reflection</td>
<td>• The discussion boards provided a means for students to get feedback from instructors and their peers (DeArment 2002:210)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
thoughts increases comprehension, insight and thinking skill (DeArment 2002:209-210)

- The discussion board fostered meta-cognitive awareness in students (DeArment 2002:210)

- The discussion boards stimulated students to “give more thought to the material and reflecting on their readings” (Ndor 2006:158)
what they want to get out of it (since) they have to organise their thoughts well enough to write (DeArment 2002:211)

<table>
<thead>
<tr>
<th>Key findings in relation to observational learning</th>
<th>Attentional processes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• The discussion boards enabled students to focus on particular topics (DeArment 2002:209-210)</td>
<td>• Access to global resources and communication is expected by students. Their thirst for knowledge goes beyond their classroom into other</td>
<td></td>
</tr>
<tr>
<td>Retentional processes</td>
<td>Production processes</td>
<td>Retentional processes</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>(No information)</td>
<td>• <em>Discussion boards</em> enhance online communication and create scholarly dialogue (Boster 2009:125)</td>
<td>(No information)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(No information)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(No information)</td>
</tr>
</tbody>
</table>

used the first discussion board assignments as a means of encouraging students to engage with the assigned readings (DeArment 2002:209)

classrooms around the world (Menard 2010:142)
| Motivational processes | Creative recognition was also important to participants who agreed knowing other students could view their assignments encouraged them to put more effort into their work (Boster 2009:129) | socialisation with peers, critical thinking and problem solving (DeArment 2002:208) | The discussion boards provided the instructor with information about students’ depth of understanding (DeArment 2002:210) | as readers (Ndon 2006:159) | Students were highly |
also important to participants who agreed knowing other students could view their assignments encouraged them to put more effort into their work (Boster 2009:129)

- Teachers were highly motivated (Menard 2010:140)
**Phase 6: Lines-of-argument synthesis**

According to Noblit and Hare (1988:62), lines-of-argument synthesis allows for inferences to be made about the whole based on selective studies of the parts, and this is amenable to the meta-ethnographic approach. This part of the meta-ethnographic approach is sometimes referred to as synthesising the translations (Britten et al 2002:211). In line with a lines-of-argument synthesis, the researcher juxtaposed the themes with the subthemes and independently developed an overarching line of argument. It should be noted that meta-ethnography cannot be reduced to a set of mechanical tasks (Britten et al 2002:211; Atkins et al 2008:7). The researcher therefore saw the reciprocity of themes and subthemes and linked them to her research. Since this was a departure from constructivism and observational learning, she linked her lines of argument to the theoretical framework of the research. She then identified reciprocal themes unrelated to her theoretical framework. In the second section, she delineated online media that best support constructivist and observational learning.

The subthemes in the themes were related to the criteria for constructivist learning (Baviskar et al 2009:543) and the functions for observational learning (Bandura 2001:273). The researcher subsequently noted new themes that emerged unrelated to constructivism and the functions of observational learning. She also found the online media associated with the emergent themes in the data. The next section presents the research findings relating to constructivism.

**4.3.6 Research findings relating to constructivism**

In the next section, the researcher linked the findings to the criteria for constructivist learning, the first of which was the elicitation of prior knowledge. The second criterion was the achievement of cognitive dissonance. The third criterion was the application of new knowledge with feedback, and the fourth and final criterion reflection (Baviskar et al 2009:543).
4.3.6.1  Elicitation of prior knowledge

In line with the first criterion for constructivism (Baviskar et al 2009:543), the student has to be able to elicit his or her prior knowledge of learning content and link this knowledge to new knowledge. In the current research, the researcher explored the experiences of students using technology and linked these experiences to the various criteria for constructivism. The link between the student experiences and the constructivist criteria of eliciting prior knowledge emerged seven times in the use of discussion boards for online teaching and learning. Three quotations associated with this particular criterion are as follows:

*The Discussion Board could help us to develop our own thoughts. A student has to have (his or her) ducks in a row before posting. The Discussion Board forces students to support their thinking, and if they can’t, they should keep their mouths shut* (DeArment 2002:105).

*I can think of several times on the Discussion Board where I have read articles (assigned for class), and someone else has read the same article, and (his or her) comments kind of articulated something that resonated with my response, an idea that I hadn’t really fully formed yet. It helped me to kind of put it together* (DeArment 2002:104).

*This teacher recognized how her students were independently pulling from their life experiences and connecting them to the district strategic objectives* (Menard 2010:95).

4.3.6.2  Cognitive dissonance

The second criterion for constructivist learning was that of achievement of cognitive dissonance. As in the case of the first criterion, the researcher explored the experiences of students using technology and linked these experiences to the cognitive dissonance and the media that stimulated cognitive dissonance. In the sourced data, this criterion occurred four times. The medium that stimulated cognitive dissonance was the discussion board. The following two quotations were applicable:

*Scrutinizing a message she had posted for Unit 4, Meg recalled, I had browsed sites as part of my work, and (my thoughts) sort of clicked when I read the discussion; that’s when*
I posted. I think I got something out of trying to gather my thoughts together (DeArment 2002:142).

I had browsed sites as part of my job, and my thoughts just sort of clicked when I read the discussion for Unit 4, so that’s when I posted (DeArment 2002:107).

### 4.3.6.3 Application and feedback

The criterion of application of knowledge was absent from the data with no themes emerging that inferred the application of knowledge with feedback.

### 4.3.6.4 Reflection

The final criterion for constructivist learning was that of reflection. This criterion was inferred from the data six times and the media that encouraged reflection were those that allowed for text messaging and included blogs and discussion boards. The following quotations were applicable:

Another example of how the participants encouraged active and independent learning was through self-reflection. Madison indicated that he used the critical incident questionnaires which appear in the Brookfield book “How to be a Critical Reflective Teacher” to ask students to “report on their experiences each week on what they learned, and what frustrated them” (Livonia) (Ndon 2006:115).

... online text-messaging tools provided varied ways they could access and engage with course information. She pointed out to the researcher examples of Discussion Board exchanges in which students reflected on awareness of their own learning (DeArment 2002:84).
4.3.7 Research findings relating to observational learning

In this section, the researcher linked the findings to the criterion of the theoretical framework for the research and addressed the findings relating to the functions of observational learning

4.3.7.1 Attentional processes

Regarding the functions of observational learning, one of the factors that allowed for modelling of observed behaviour is that of attentional processes. On the part of the modelled activity factors, salience, attractiveness and functional value are the key attributes (Bandura 2001:272). In this regard, the theme of attentional processes came up five times during data analysis, with attractiveness appearing once:

Thus, to Meg, effective messages were those that were carefully crafted, and her scrutiny of discussion threads in preparation for her own reflective messages helped her to gain insight into her own thinking and learning processes (DeArment 2002:143).

Attentional processes include affective valence, which includes salience on the part of the modelled activities. This means that the modelled activity is viewed as striking and conspicuous. In this regard, this theme appeared twice in the data analysed and discussion boards, videos and learning objects were the media that facilitated this process:

When we can ask questions on the discussion board and see other student work it is helpful. Multimedia classes are more visual and fun online I think the discussion boards are vital to the class. It’s vital to help students succeed and the support from other students is important (Boster 2009:81).

Thomas indicated that the online environment was good for information seeking, retrieval and storage of reading materials, syllabus, or reporting on on-going progress. Barb believes that videos and learning objects are best for the online environment and added, “I think what happens is that if you can make the online environment as visual as possible that really helps the students, that is, if you can move beyond the text (Ndon 2006:108).
The internet served as a source of modelling events once students realise the functional value of the resources:

The teachers reasoned these gains could be attributed to students accessing research materials on the Internet that were intended for higher grade levels (Menard 2010:56).

4.3.7.2 Retention processes

The retention processes include the active process of transforming and restructuring information conveyed by the modelled events (Bandura 2001:272). One of the ways in which this occurs is by cognitively organising the modelled events. In the data for this research, retention through cognitive modelling occurred once and was facilitated by discussion boards:

I had browsed sites as part of my work, and (my thoughts) sort of clicked when I read the discussion; that’s when I posted. I think I got something out of trying to gather my thoughts together (DeArment 2002:142).

The teacher participants discussed how students consistently exceed expectations when using technology. Students are fully engaged by multimedia content that accelerates learning and improves comprehension. The students seem to assimilate digital information easily (Menard 2010:60).

Meg gained insights about her perceptions of effective messages when the researcher asked her to reflect on several of her posts. Meg recognized the value of messages that reflected careful thought and realized that other students’ messages could serve as catalysts for her own thought processes (DeArment 2002:142).

In addition, retention processes may occur through symbolic coding, and the discussion board proved useful in this regard:

The Discussion Board forces students to support their thinking, and if they can’t, they should keep their mouths shut. Others’ posts gave me stuff to kick around and see what came out [when I wrote my thoughts down]. Their posts have helped me to crystallize my ideas, to rethink what I thought I was learning, or to realize that maybe I need to step back and look at this again, or to go to my friends and hash it out with them (DeArment 2002:105).
Even though I has (sic) read the text and articles, they had been too abstract. But Ruth’s comments made it seem to me that XML is usable (DeArment 2002:104).

Bob thought that it was “a different kind of teacher’s time” because it is/was not as fixed as it is in the face-to-face class and the discussion forum produced “interesting thought provoking activities.” He further stated, “[I] think that the students learn more because they are more engaged. I think that they have more opportunities to develop their own approach to logical ideas and to contribute to the work of the class as a whole (Ndun 2006:137).

The teacher participants observed marked improvement in student comprehension and creative expression after two years exposure to a technology infused curriculum (Menard 2010:53).

4.3.7.3 Production processes

The third sub-function of modelling for observational learning is the production process. According to Bandura (2001:272), this process involves the translation of symbolic conceptions into appropriate courses of action. Constituent processes associated with the production process include the use of feedback for conception matching. In this regard, the quotes related to production processes included the following:

*Immersed in projects of their own design, the students could also take ownership of the core curriculum underpinning their work. The students were not expected to simply write about the story. Students could write a song, poem, or produce a slide show to show what they had learned to the rest of the class. Continuous access to technology provided the students with many options (Menard 2010:82).*

*When the student took Barb’s hybrid class, in the face-to-face part, the student again, was noticed to be very quiet. But Barb and other students noticed that in the online environment of the hybrid course, this student was able to express herself very well. She was extremely articulated to a point that some of the students had to wonder who the student was because they were so impressed with her contributions. This example reinforces the notion that going at teaching in two different, but integrated ways improves student’s involvement, engagement, and learning (Ndun 2006:140).*
A student’s individual strengths are recognized and valued. As students present their work to other students, they analyze and evaluate their contribution to the final product. The student “audience” evaluates how individual contributions impact their work as they listen to the presentation. Editing and “polishing” the final product is a routine activity for EDGE students (Menard 2010:70).

The true measure of success for the students using this software was the abundant creative writing they used to tell their illustrated stories. These same students had habitually shunned traditional writing exercises before the introduction of the comic book software (Menard 2010:94).

4.3.7.4 Motivational processes

The fourth subfunction in modelling for observational learning as identified by Bandura (2001:274) is the motivational process which emerged as the most prominent theme in the analysed data. Constituents of this theme include social incentives. The discussion boards were the online social media that facilitated motivational processes as referred to in the following quotation:

The discussion board was a social place to exhibit and discuss multimedia projects and this interaction motivated students to participate and learn online (Boster 2009:102).

In my experience classes were a lot more fun online when you can share views on class work and have discussions as assignments rather than (sic) just turning in a weekly assignment. So even if the student is forced to participate and socialize (because it is a required assignment) with other online students it was more enjoyable (Boster 2009:69).

Collaboration creates a “community” in the class. This community learning environment supports the intensive effort that is an aspect of students and teachers pursuing a common goal. Teachers may recognize a unique method to inspire and to motivate students in their classes. Typically, students respond in an enthusiastic way towards technology. One teacher participant commented, “It doesn’t always have to be my way” (Menard 2010:62).

I took online classes because I did not feel prepared for the classroom. I am ready to be in a classroom and look forward to going to Evergreen. I am also ready to network with
others. I would like to get more involved I feel better about being in a classroom after taking online classes (Boster 2009:77).

Sometimes you don't feel like part of the school, because you aren't there all the time and don't feel connected with other students, but it doesn't have to be that way. You can coordinate a study group with students from your online courses, and have respectful, interesting conversations and discussions. It just depends on how much you put into the socializing and connecting with other students (Boster 2009:70).

A second constituent of motivational processes includes vicarious incentives. Vicarious incentives were inferred once in the data, as indicated in the following quotation:

**EDGE classroom teachers regularly use big concept activities. Incorporating smaller lessons into a large scope project encourages students to work through the fundamentals to get to the “fun part”, and steadily expands their research on the project. The finished project is the amalgamation of many different thoughts and ideas created by the student. Student creativity is further enhanced through collaboration and sharing. Technology provides many ways for students to showcase their work. This also helps students who prefer digital solutions to “paper and pencil” (Menard 2010:70).**

Self-incentives are another constituent of motivational processes and were inferred once, as indicated below.

**The imagination that emerges (from online research) is amazing. The teacher continued, “When the story is over in the reading series it’s really not over in a technology-based classroom. The students take it so much further than we possibly would have taken it without technology” (Menard 2010:64).**

External incentives were the constituent of motivational processes in observational learning and were inferred 11 times. The online social media that served as an external incentive in motivational processes was the discussion board. The following are some of the quotations relating to external incentives:

**I think it’s awesome! That’s what is most rewarding, because if I felt I did not understand an assignment I could go to the discussion board for help. I could post concerns and we can help each other. That is what brought it all together for me, and people were so**
willing to help. I found help outside the discussion board and could email other students for help or I would help them (Boster 2009:76).

Students gained a sense of gratification and motivation when others responded to their posts, and the valued messages that fostered awareness of their peers of individuals and a sense of community (DeArment 2002:134).

The requirement of submitting to the Discussion Board motivated me to do some reading before I could respond. I feel I have to look at other sources and do active research before it becomes a part of me. I went to the Internet to see some good sites that Ruth had posted on XML. They helped me (DeArment 2002:108).

I’m posting mainly because it’s required, but I like to post because it motivates me to read people’s posts and I think about how I can apply to my knowledge to what they’ve said. Then I post my own personal applications and examples. For the most part that’s how I interact with the Discussion Board. I usually can’t learn much from reading; I have to hear everything. I listen in class, and then, if I can, I teach it to someone else. If I can explain it to someone who doesn’t understand, I know I will learn it. The Discussion Board lets me do this (DeArment 2002:108).

The first year EDGE teachers found that students accepted responsibility for their own learning. The teachers felt that technology motivated their students by providing a creative outlet that attached personal meaning to their work. The teachers valued these uniquely personal connections and the insights they provided into their students’ lives. They also became more attuned to the nuances underlying student questions, especially when they were discussing these “big” projects. The students knew that their projects would be published online where their friends and family could see them (Menard 2010:95).

Online there was at one time I remember specifically a comment from a student who had seen my work and wrote in that I was capable of taking my work to new level. This made a big impression and was a positive motivator for me. I feel it helped me creatively and changed the way I approached my creative work. When someone points out a positive in a project that you are uncertain of it is awesome. It really changed me and built up my confidence (Boster 2009:96).

I put more effort into my assignments and try to create work that is better than other students. I think about what other students will think of my work as I do my assignments.
Seeing so many different approaches and the quality of student work is motivating (Boster 2009:83).

In the multimedia world, it just makes sense to work online. Many jobs in this field will have some telecommuting involved (as my current job does) self motivation is key in that aspect. Having part of your education done in that type of environment bolsters that discipline (Menard 2010:113).

However, it was pleasing for David to hear from students and to see students, some of them going to major universities as a result of taking his classes. This experience made David realize that what he was doing must have worked for a lot of people. Rebecca indicated that she was excited about her first hybrid class, because it was “just so wonderful because the students were able to do whatever they needed to do and were able to help each other”. Issac’s satisfaction came when he started to read all the positive comments on the discussion board in the hybrid course and when he noticed that the hybrid courses had become significantly more popular (Ndon 2006:137).

4.3.7.5 Relationships between the themes and online media

The purpose of this meta-ethnographic study was to synthesise previous research theses in order to gain an understanding of students’ experiences of online media blends, constructivism and observational learning. In this section, the researcher therefore linked the emergent themes to constructivism, observational learning and the online media that emerged as facilitating learning (see tables 4.4 to 4.7).

4.3.7.6 Discussion board

In terms of the online media for facilitating constructivism and observational learning, the discussion boards featured seven times as aiding in the elicitation of prior knowledge, which was the first criterion for constructivist learning. Similarly, the discussion boards appeared twice as stimulating cognitive dissonance on the part of the students. The discussion boards appeared twice for the criterion of reflection, which is the fourth criterion for constructivist learning.
The discussion board featured twice as a means of facilitating attentional processes and once in facilitating retention through symbolic coding in the functions for observational learning in the synthesised theses. External incentives were the constituent of motivational processes in observational learning and were inferred 11 times. The online social media that served as an external incentive in motivational processes was the discussion board. In addition, the discussion boards were referenced 11 times as the online media that facilitated external incentives. External incentives are a constituent of motivational processes in the functions of observational learning. The discussion boards and the benefits they offer in the facilitation of constructivism and observational learning are represented in figures 4.2 and 4.3 below.

### 4.3.7.7 Online blogs, videos and the internet

Online blogs as a means of facilitating constructivist learning occurred once in the data. The online blog featured as a tool for reflection on the part of the students. Regarding attentional processes as a function of observational learning, videos emerged as a facilitator of observational learning. The internet featured as a means of facilitating modelling in the functions of observational learning.

![Figure 4.2: Discussion boards’ frequency in the facilitation of constructivist learning](image-url)
Phase 7: Expressing the synthesis

In order to ensure consistency in the final phase of the meta-ethnographic study, the researcher attempted to express the synthesis for an audience that included educational policy makers, educational researchers and online practitioners (Noblit & Hare 1988:29; Britten et al 2002:213). The aim of the expression of the synthesis was to present the findings to her audience. She thus presented the findings on the basis of the frameworks that served as a guide to her research.

4.3.8 Online media for constructivist learning

The meta-ethnographic study found that in relation to the criteria for constructivist learning, the discussion boards were the most suitable online application. There was one criterion, which according to the synthesis of data, was not effectively met by the use of discussion boards. The criterion was that of application of knowledge with feedback. This may be as a result of the assessment practices employed at Unisa such as the online assessment methods that lecturers are trained to utilize.

Online blogs also facilitated the criterion of reflection. In this regard, discussion boards and online blogs may be used to facilitate the criteria for constructivist learning. However,
based on the findings of this study, the facilitation of the criterion of application with feedback requires an alternative online application.

### 4.3.8.1 Online media for observational learning

Regarding observational learning, the discussion board was the online application that facilitated the attentional processes constituent. Similarly, the discussion board facilitated retention processes and motivational processes by acting as a means to external incentives, which is one of the constituent parts of motivational processes. Online videos similarly were seen to stimulate attentional processes during observational learning.

### 4.4 Conclusion

This chapter dealt with the meta-ethnographic study which formed the first phase of this research study. The objective that served as a guide in this first phase of the research was to synthesise previous research theses in order to gain insight into lecturers’ and students’ experiences of online social media blends, constructivism and observational learning.

The meta-ethnographic study was guided by the procedures prescribed by Noblit and Hare (1988:29). In addition, the researcher related the findings to constructivism and observational learning which were the conceptual frameworks underscoring the research. The final part of the meta-ethnographic study required expressing the synthesis (Noblit & Hare 1988:29). The researcher opted to express the synthesis in chapter 5 of this thesis. In an attempt to make the synthesis relevant to her research, she also reflected on additional themes and subthemes that did not relate to the framework, but were nonetheless prominent in the synthesised studies.
CHAPTER 5

RESULTS OF THE PHENOMENOLOGICAL EXPLORATION OF LECTURERS’ EXPERIENCES OF ONLINE MEDIA, CONSTRUCTIVISM AND OBSERVATIONAL LEARNING

5.1 Introduction

The aim of this chapter is to describe the results of the phenomenological enquiry into the lecturers’ experiences of online media in the facilitation of constructivism and observational learning. In addition, the researcher presents a framework that she developed on the basis of constructivism and observational learning to guide online teaching and learning for online learning. The framework is based on the data received in the meta-ethnographic phase of this research as well as the phenomenological exploration conducted. This qualitative phenomenology was an attempt to understand the hidden meanings and the essence of experiences together with how participants make sense of the use of media in online learning. Nine participants who were involved in online learning were interviewed. The sample consisted of 9 participants, 6 were interviewed online and 3 were interviewed face-to-face making a total of 9 participants (see table 5.1). The interviews were conducted over a period of four months. Academics using online learning were difficult to access because online learning was a new teaching strategy at Unisa. This meant the lecturers were extremely busy with the course delivery, training and mentoring of teaching assistants on the online courses. The participants in this research ranged from junior lecturers to full professors.

Table 5.1: Sample of participants in the phenomenological study

<table>
<thead>
<tr>
<th>College</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEDU</td>
<td>3</td>
</tr>
<tr>
<td>CAES</td>
<td>1</td>
</tr>
<tr>
<td>CHS</td>
<td>1</td>
</tr>
<tr>
<td>CEMS</td>
<td>1</td>
</tr>
<tr>
<td>CLAW</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
</tr>
</tbody>
</table>
5.2 **Data analysis strategy as a form of thematic analysis**

The aim of the data analysis was to study the descriptions of the participants to uncover the essence of the phenomenon of media in online learning. The meaning of the use of media in online learning at Unisa lay in the main themes that the researcher identified in this study through thematic analysis. Throughout the data analysis process, she continually questioned the data and emerging themes to ensure new descriptions and conceptualisations that were likely to arise. Descriptions of the themes, metaphors and nodes captured the essence of the participants’ experiences of the usage of media in online learning and added to the credibility of the study as the themes mirrored the experiences of the phenomenon as seen in the framework for the study depicted in figure 5.6. The framework developed for the study is described in each theme below.

### 5.2.1 Data gathering of closely connected ideas, words or concepts

The researcher identified themes and meanings from each transcript with the assistance of the computer qualitative data analysis program, ATLAS.ti, to identify the categories and subcategories relating to the research question: *Which online media facilitate constructivism and observational learning in online learning environments?* She identified natural meaning units or phrases which she referred to as quotations from the transcripts. The themes were central to the transcripts and mirrored the experiences of the participants in this study. The researcher wrote phenomenological comments on each central theme.

Furthermore, concept maps were developed to place the interpretative themes into related fields indicating interconnections around the phenomenon of media, constructivism and observational learning in an online learning environment by using the computer program, ATLAS.ti. See figures 5.1, 5.2, 5.3, 5.4, 5.5 and 5.6 in this regard.
5.3 Results of the phenomenological exploration of the lecturers’ experiences of online media in the facilitation of observational learning

This section discusses the results under the headings of the five main themes that emerged from the data. Direct quotations from the interviews in italics are provided and indented in the text. References to the quotations from the interviews indicated the participant number and the lines in the transcripts, for example (1:30-35). The text bracketed in italics was added for a better understanding, for example, (when I teach, I use...). In some instances, the researcher added a word or two in square brackets to clarify the meaning, as follows [online learning]:

The five main themes that emerged from the data were as follows:

(1) Theme 1: attention processes with eight nodes

(2) Theme 2: retention processes with ten nodes

(3) Theme 3: production processes as the most comprehensive theme with 12 nodes; this was anticipated because this was the focus of the study and indicated the different media used in online learning

(4) Theme 4: motivational processes with three nodes

(5) Theme 5: current issues in online learning with nine nodes reflecting the issues and problems lecturers experienced when facilitating online learning

It should be noted that sub-themes relating to constructivism were similarly linked to the themes identified above. These original titles for the main themes were changed to more descriptive titles during data analysis to capture the words of the participants. The renamed themes, with examples of the quotations from the participants, are provided in table 5.2 below.
Table 5.2: Main themes, re-named titled themes and quotations from the data

<table>
<thead>
<tr>
<th>No.</th>
<th>Initial theme and nodes from the study</th>
<th>Metaphors</th>
<th>Quotations from the participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Attention processes</td>
<td>The interface between the chair and the keyboard</td>
<td>The interface between the chair and the keyboard is a crucial interface in any teaching intervention, particularly higher education, you know, you have to have somebody who can deliver complicated material at the appropriate level to students. (8:8)</td>
</tr>
<tr>
<td></td>
<td>Prior learning</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Cognitive capabilities</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Active learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-creation of knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Problem solving</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Functional value of technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peer interaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interactive learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Retention processes</td>
<td>We need a bridge</td>
<td>But we need a bridge, we need our students to be online before they register, it’s unfair ... I know this is to force them to go online, but it’s really, really scary for the students to go online. And I’m going to do a remedial thing for my students from 2014 to try and get them more online from the onset. But we’re working on it,</td>
</tr>
<tr>
<td></td>
<td>Heutagogy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application of knowledge</td>
<td></td>
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<td></td>
<td>Bridge to online learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teaching assistants</td>
<td>we’re working on it. (7:22)</td>
<td></td>
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<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Feedback</td>
<td></td>
<td></td>
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<td></td>
<td>Self-reflection</td>
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<td></td>
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<td></td>
<td>Formative assessment</td>
<td></td>
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<tr>
<td></td>
<td>Scaffolding</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Production processes</th>
<th>Discussion forums work best for my teaching</th>
<th>The students engage in discussions and interact very well in the discussions on the forum. (2:2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>myUnisa</td>
<td></td>
<td>I have found from my experience that discussion forums work best for my teaching. The discussion forum that my students use enable(s) them to view each other’s work and this influences them in a positive way. As a result I get a higher quality of assignments than I used to receive before I began using the discussion forum. (4:4)</td>
</tr>
<tr>
<td></td>
<td>Drop box</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Discussion boards</td>
<td></td>
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<td></td>
<td>Gradebook</td>
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<td></td>
<td>Blogging</td>
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<td></td>
<td>Wikis</td>
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<td></td>
<td>Questions and answers</td>
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<td></td>
<td>Wikipedia</td>
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<td>Emails</td>
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<td></td>
<td>Groups</td>
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<td></td>
<td>Facebook</td>
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<table>
<thead>
<tr>
<th></th>
<th>Motivational processes</th>
<th>The students are the ones who excel and I feel motivated to</th>
<th>I have even at one stage given the students additional assignments after reading their postings on the</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Social learning

Motivation  
Student support  

Further assist them through discussion boards. Although this is more work for me, I still find it very rewarding as the students are the ones who excel and I feel motivated to further assist them. I feel like I know these students even though I have never met them face to face. (1:7)

### Current issues in online learning

<table>
<thead>
<tr>
<th>Team approach in curriculum development</th>
<th>A lot of systemic challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support for academic staff</td>
<td></td>
</tr>
<tr>
<td>Systems problems</td>
<td></td>
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<tr>
<td>Mobile learning</td>
<td></td>
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<tr>
<td>Digiband</td>
<td></td>
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<tr>
<td>Disadvantages of online learning</td>
<td></td>
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<tr>
<td>Resistance to online learning</td>
<td></td>
</tr>
<tr>
<td>Dropouts</td>
<td></td>
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<tr>
<td>Plagiarism</td>
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</tbody>
</table>

It’s systemic problems, yes, huge, huge systemic problems where our assessment wasn’t set up correctly. I mean, from setting them an event for us. But as I say, the programmes haven’t been written for us and what is wonderful they are going along with us and opening up the systems for us. If we need a function they say: we’ll create that function for you to make that possible. But at the moment it is: how do you know you need the function until you get there. So this is what’s happening where we realise ... The student will say: the system’s not opening for us; I can’t submit my assignment, so ... But we are dealing with those. I’d like you to have this interview with me in another six months’ time and then see, because I think it will be more positive. But we’ve had a lot of systemic challenges.
5.3.1 Theme 1: The interface between the chair and the keyboard

This theme on the attention processes consisted of eight nodes, namely prior learning, cognitive capabilities, active learning, co-creation of knowledge, problem solving, functional value of technology, peer interaction and interactive learning as indicated in figure 5.1 below. This theme reflected on the processes employed to arouse the students’ attention in online learning. The theme described those aspects and processes which the lecturer employed to keep the student interested and engaged in the study material. For online learning to be effective, the environment must enable students to interact and observe the results of their learning while responding and engaging with others.

Prior learning of the students is a vital factor in the learning process. The impact of prior learning is usually high on students’ learning, but it is not clear how the student actually recalls prior knowledge. One participant reflected on how he or she used the prior postings to enforce learning as follows:

*When using the discussion forum, I am able to refer to prior postings made and I am also able to refer my students to these prior postings and references made in earlier postings. I have found this to be very helpful to the students learning and my teaching is made easier.*

(1:12)

Another key aspect for any learning is the cognitive capabilities of the academic staff member as well as that of the student, as indicated in figure 5.1. Cognitive abilities were one of the nodes the researcher found in more than one theme in this research. This was to be expected because cognitive abilities are part of academic processes. This was also true of the framework that guided the study according to figure 2.3. A participant reflected as follows and emphasised the importance of the academic’s input (cognitive processes) into the process of teaching and learning and in online learning:

*It’s an issue between the chair and the keyboard, if you like, I think that’s the ... And, you know, there’s really ... Yes, I mean, I sometimes think that we overstate the value of technology, or we think that technology is going to correct for a whole bunch of things,*
which it’s not. Somebody asked me, you know, what’s the key to developing a good online module? The key to developing a good online module is having good content; actually it’s not bells and whistles technically, it’s having good content which you, you know, you’re trying to deliver. Actually, I think anyway. Bells and whistles from a technology perspective are great and they can facilitate the learning of that good content, but if the content’s rubbish you’re not aware of anything. (8:9)

Active learning and the provision of opportunities for in-depth learning and engagement in learning matter were identified as essential aspects of successful online learning. Most of the participants in this study reflected on it as follows:

*On that occasion, one of the students reflected insights from his work experience and this led the discussion in an interesting and new way that I had not foreseen.* (1:10)

The only problem I noticed was 2 students who seemed to be the leaders of the discussions and the others simply followed what the leaders were posting. I then changed my approach and asked each of my students to write blogs on their personal assignments with hyperlinks to online resources. This exercise helped my students become active in finding relevant learning material online and it also helped them express themselves in a concrete and cohesive manner. (5:5)

*The first benefit I noted was the relative speed of the posts made from the students I received to questions I posted on the forum.* (6:4)

*I send them an email, check ... The world is so small that you have all your ... I have six TAs and 800 students in my office here immediately if I want to reach out to them. So I’m excited by it. I think it’s the only way that we can go.* (7:21)

“I’m pretty sure that the names that I’ve seen a lot or that have contacted me as the primary lecturer, if I look and ... like there’re five or six names that I know already where they complained about their teaching assistant not being available or whatever, they have done well. There’s one that comes to mind, everything of hers is over 67%. So I’ve already identified where you have your students that really feel they need more out of the course that put in a lot more effort. (7:24)

*Those who are active will get better marks, partly by virtue of the structure of the module. The module is all about ... the bulk of the marks are about expressing views, are ...*
trying to draw it out, so it’s a very different module to, you know, to a usual Unisa module
where the big part is to convey a body of knowledge, the person leaves with a big body of
knowledge; this is not about transmitting a body of knowledge. (8:13)

So those that are engaging, those that are participating are definitely going to get better
marks, I mean, there’s no doubt about it, because they’ll just be engaged with the
problems and so much of the marks are for that engagement, so, yes ... (8:15)

Involved ... It’s patchy; it’s very patchy (8:16)

I wasn’t sure what to expect at a first year level and I’ve been possibly a little bit
disappointed, but it depends very much on the group. So you know this module is divided
into the groups – you’ve got groups of 30 students – and it depends who’s in the group,
right. So if you have two big mouths, and especially if you have two big mouths who don’t
have the same opinions, then you get brilliant debate. And so on some of the sites there’s
brilliant debate which has emerged; on others there’s nothing, I mean, it’s really ... you
know. And you’ll tell students go and have a look at what your fellow students have said
and you’ll see one person says X, the next person says Y, but with no reference to the
student beforehand, so they’re just putting down, you know, their result or their answer
and that’s it. (8:17)

I have found that the students and I are motivated to participate in the discussion forums, I
believe the element of anonymity lets the student feel free to participate and they are not
shy to contribute to the discussions. In one discussion about violence in schools, one
student posted that they condoned violence if it was in self defence against bullying. This
led the discussion in an interesting and un-charted territory. This discussion was so
intense and some of the students had changed their initial views by the end of the
discussion. (2:5)

So I’ll give you an example: the one assignment where we get the most riotous kind of
reactions from students is about ... it’s an environmental ethics issue and so we posed a
question in the multiple choice questions which said: save the rhino, and then there were
... the options ranged from why, let the people who want to use it pay for saving it, right
through to saving it for our children or we must save it because it’s the right thing to do.
So it’s a whole range of, sort of, perspectives on it. So we put a very provocative picture of
a dead rhino with a calf, so it uses visual provocation, so students immediately, you know,
feel this, kind of, empathy with this, you know, very, very tragic scene. And then we say, well, your lecturer’s opinion is Y, which is probably the most harsh and jarring, what is your opinion, why do you have that opinion, what do you think of your lecturer’s opinion. And that really gets students going, more than any of the other assignments. (8:11)

But in general we try and provoke them; we try and give them stuff which shocks them. So we have one with 20,000 students ... 20,000 children die every day of poverty related treatable diseases. And then we say, well, go and do a Google image search on child poverty and you get these, you know, these shocking images. So, yes, as I say we try and provoke students to have a passionate feeling about something and then we ask them to apply knowledge to try and address that passionate feeling, you know, yes ... There’s an Italian Marxist, Antonio Gramsci, and his view was or he said something to the effect that people with knowledge often lack passion, people with passion lack knowledge, and the idea of this is really to try and bring them together. So that’s how we get them onto the discussion forums. It doesn’t always work; some students are just not going to get there. It’s an NCV [?] level 5 module, so, you know, some people have said, well, it’s actually too early in a university degree to start giving people so much voice. But anyway we’re trying and it does seem to work with a significant number of our students. (8:12)

Co-creation of knowledge was a vital concept in this study on constructivist learning and online media blends. One participant reflected on it as follows:

When I read what the students are writing on the discussion forum, I can see where the group’s strengths and weaknesses are and this helps me to adjust my support and assistance to them accordingly. I have also experienced that these discussion forums are where I can get resources that I can use for the rest of the group who are not online. We as lecturers can learn a lot from the students just as they can learn from us and from each other. I have found that the discussion forum on myUnisa allows all of us to learn from each other. (3:3)

One participant reflected on problem solving in the online learning process as follows:

I mean, we do present knowledge to them and we do hope that some of it will seep in, but really we want to see immediate application of knowledge to a particular problem and then the thinking about the problem; so we’re really looking at the thinking about the problem. (8:14)
The functional value of technology was referred to briefly because Unisa had only recently embarked on online learning at the time of the study. One participant stated the following:

*It’s the first time really most Unisa students have ever done anything completely online like this. So, you know, I didn’t want to bombard them with a thousand different variations, I figured keep the technology as consistent as possible. You get used to writing discussions then at least that’s not a burden. After the first discussion forum they know exactly what they have to do, so they’re not continuously trying to figure out a new platform for expressing themselves. So that’s what I do.* (8:4)

Peer interaction and interactive learning provided opportunities for sharing and checking information among students in online learning. Students could also support each other by means of interaction and encouragement. See figure 5.1. Participants in this study reflected on peer interaction as follows:

*And then we go a higher level where we use discussions as part of the assessment; so they then have to go and discuss something. Then for their assignments, they have to go and cut and paste their discussion and the comments of three other students, put those in, and then they have to comment for us on the three different comments. So you have a higher level of learning then by using the discussion forum and that is then part of the assessment.* (7:12)

*So we’ve marked discussions. So I’ve looked and I think it’s nice, I can see how students learn from each other and we’re pretty polite; the students … we don’t have issues with students becoming unruly.* (7:28)

*So that’s something that I need to work on. I’m not sure how to get them to read each other’s assignments, but, you know, there are possibilities of forcing them to read other people’s assignments and then writing a comment as an assignment. But that’s something I’ll worry about for next semester. I know some of my colleagues in the signature modules have got that kind of assignment where, you know, you’ve got to do a submission and then you’ve got to write a comment on somebody else’s submission. And that’s probably what I’ll eventually do.* (8:18)

*It’s student to lecturer and then the students to one another, but we can see that, we can, I will not say control it, but the students will … one will give an opinion, another one will respond and then we can still intervene if it’s necessary or if we want to respond. Yes, they definitely talk to one another. Our signature course gives … they give a lot of information...*
and it challenges them to give their own opinions, and they will easily then sometimes attack one another or give their opinion on the other student’s opinion and motivate why they didn’t believe in that thing. Yes, so they are interactive with one another, as well as with their TAs. [Teaching Assistants] The TAs will also intervene if necessary or respond or give them something, let’s talk about this topic a bit, why they don’t [unclear] the course. (9:4)

So I try and make it interactive, and the wonderful comments that we’ve got back from students, they’ve said they wished they’d worked online before they started the course, because they would’ve got so much more out of it. And I’ve got one or two emails from my teaching assistants where students have written a note and said now we’re actually going to go and do computer courses so that we can work more interactively. (6:16)

The posts were also better written than those placed in the assignment boxes. Students seemed to be aware that others could read their posts. I encouraged the students to respond to their peers posts as a group. This encouraged collaboration and consensus on their part. One major weakness for me was the stronger opinionated students taking over the discussions and the weaker ones repeating the postings of the stronger ones. (6:8)

I have found that the students are able to write and upload their assignments on myUnisa. Two of my group are very active in this regard. They reflect on each other’s postings and post their own essays. I like the learning they are able to do from one another. (1:13)
5.3.2 **Theme 2: We need a bridge**

Theme 2 on retention processes referred to a great extent to cognitive processes in teaching and learning. This theme was renamed to form a metaphor in order to extrapolate the words of the participants, namely “We need a bridge.” The bridge visualised the need for a cognitive process to move from print media to electronic or online learning. This theme consisted of ten nodes which included elements such as a bridge to online learning, heutagogy, knowledge application, teaching assistants, feedback, self-reflection, formative assessment and scaffolding, as indicated in figure 5.2 below.

Students need orientation before they can register for the online courses or else no learning can happen. Participants referred to the bridging processes as follows:

*But we need a bridge, we need our students to be online before they register, it’s unfair ... I know this is to force them to go online, but it’s really, really scary for the students to go online. And I’m going to do a remedial thing for my students from 2014 to try and get them more online from the onset. But we’re working on it, we’re working on it.* (7:22)
One of the things which I’m beginning to realise is that teaching assistants were less active in providing feedback than I would’ve liked to have seen. You know, they … maybe it’s because it was their first semester, they basically focused on doing the marking; they didn’t focus on trying to pull debate out of students. So that’s something that needs to be changed, something that’s not perfect at the moment. (8:5) I must say that I think overall the students are very positive towards ODL and online. If you explain to them sometimes they are a bit overwhelmed and confused and then we will sometimes, (I would) say to them, it’s almost like Facebook or … you know. If you go every day on Facebook you can also … you need to go online every day if you can; it’s good to go very often on the online thing, and they … Yes, there are challenges, but I think the positive feedback is also there. Students that didn’t even know how to put on a computer and if they are going through this process afterwards they will … they say they’ve learnt so much, not only about the course content, but also how to use a computer, how to blog or to go to discussion forums and so on. (9:5)

One participant briefly referred to application of knowledge as follows:

I find that I am improving as a lecturer and I have to be up to date with developments in my area because sometimes the students can debate and I as the expert have to know what guidance I have to give them. (4:2)

Feedback in teaching and learning was important and participants referred to is as follows:

Throughout this exercise the students received my feedback on their blog postings. (5:6)

O, yes, I mean, I’ve found the feedback is probably not adequate this semester, but that’s not to say that’s not the intent to have good feedback and good engagement. And it’s not even feedback actually, it’s debate. I mean, in this module we don’t … you know, we’re not going to say, oh, that’s wrong. We might say I don’t agree with that, because of X, Y and Z, and you can say, oh well, I don’t agree with you, because if that. So that’s the point of the module; the modules not to, you know, to give them a perspective of this is truth, it’s to provoke them to think and debate and to question everything, so, yes. (8:6)

Formative assessment seemed to have been a key aspect of online learning because it drove the teaching and learning process. Participants referred to formative assessment as follows as a means of communication (in the form of feedback) to students in ODL:
We have 820 students who’ve registered for the module. I’ve just looked at the statistics, about 435 of them successfully submitted all six assignments and they now have to submit a portfolio of evidence for the exam. (7:3)

“So we have six formative assessments and then the one final summit of assessment in the form of a portfolio of evidence.” (7:4)

And we have … We build up, so we have, sort of, smaller assignments, fill in a table, and then we start going to enter the discussion, get a mark for it, following one into discussion, get a mark plus commenting on somebody else’s. (7:13)

They get taught a bunch of theory and at each step in the teaching of the theory we go back and interrogate perhaps one or two of the multiple choice questions in a little bit more detail on the basis of the theory. And then right at the end we get them to re-run the whole multiple choice thing and to then see how they’ve … how their experiences have changed based on this theory that we’ve given them. (8:3)

Heutagogy as a pedagogy of student engagement in the study material, a way of sustaining the attention of the student and constructivist learning, was another node captured by participants in this study in various ways. Heutagogy was present in more than one theme. Two participants reflected on it and referred to heutagogy specifically, as highlighted below.

So we started then working with DCLD [Directorate for Curriculum and learning Development], we had somebody that did our pedagogy for us and developed, according to form threes, our whole syllabus. And we used a Heutagogy. (7:1)

The teaching happens on the steps as much as it happens in the lecture theatre. So here you have the opportunity for creating these virtual steps outside a canteen and you have it in a more secure space. So even if a person is very shy they can still express an opinion, because they’re protected by this internet thing. And the lecturer’s sitting on the steps in theory, you know. So there’s a lot of potential in this in terms of raising the bar for distance education. (8:12)

Teaching assistants were an integral part of online learning and they had to fulfil a supportive role in monitoring student assignments and provide guidance to students on
how to navigate through the online learning environment. Participants stated the following in this regard:

I have six teaching assistants that help, each one of them has got six groups [unclear] called classrooms, so each TA has got six classrooms that he or she’s responsible for, each one has a specific group on the myUnisa, so they’re numbered from one to 26; so there are 26 groups. And then the teaching assistant actually supervises the students for me, does the assessments and runs discussion forums and the drop box and everything, so ...

(7:5)

Well, I mean, we’ll have to see whether it’s possible to get teaching assistants who are at such a ... I mean, they’re at a ... I’m really not sure if it’s at a level nine, so it’s a junior lecturer post. Most of them have just got an honours degree, maybe; actually some of them don’t even have an honours, I think some of them have just got a first degree. And so, you know, they’re very junior people in the hierarchy and so, you know, maybe it’s almost too much to expect them to be able to sustain really very intelligent, very critical debates. Because that often takes you being able to present multiple opinions yourself, you know, if a student says X you need to be able to say Y and you need to be able to say Y convincingly. And if a student says Y, you need to be able to say X to try and force students to contemplate different world views. Yes, and I think a lot of the teaching assistants are bound to a world view and are not really in the space where they can put a different world view across. (8:6)

Of the entire group, so its group think. And I’ve observed it and I’ve told my teaching assistants that they need to break that up, okay. So that’s when you need a teaching assistant who can say Y or X and argue it compellingly. If they see this group think emerging then the role of the teaching assistant must be to throw a spanner in the works, you know, and use that power to undermine the initial power, to try and get the debate going. But we haven’t done it yet; that’s the theory. You know, that’s where the teaching assistant role should become important. As soon as you start seeing a group think happening, the teaching assistant needs to get in there and break that group think. You know, that’s what I’ve done previously in discussion forum, you know, play devil’s advocate, if you like. And because of the power of the role of a teaching assistant, you know, you can break that initial compelling argument. So, yes, that’s something which we need to work on, as I say. (8:19)
The problem becomes that massification again, right, because you then start needing to shrink your groups to the 30 or whatever. When you start shrinking your groups you need teaching assistants and, as I’ve already said, there’s quality issue with teaching ... Where do you find enough good quality teaching assistants to get that discussion really happening? (8:22)

Figure 5.2: Theme 2: We need a bridge

5.3.3 Theme 3: Discussion boards work best for my teaching

Theme 3 consisted of 11 nodes and was the most comprehensive theme. This was to be expected because the study explored media blends in online learning. This theme reflected on the production of the learning process and referred to those instruments or tools that lecturers and students use to facilitate learning. This theme referred to media and social media which are currently used by Unisa to facilitate online learning. One would expect this theme to expand as online learning progresses and more media options become available to staff and students.

Many participants referred to discussion boards. It was clear from the findings that lecturers were familiar with discussion boards and that they used this method as the major
communication tool to facilitate online learning. The participants reflected on discussion boards as follows:

I have found from my experience that discussion forums work best for my teaching. The discussion forum that my students use enables them to view each other’s work and this influences them in a positive way. As a result I get a higher quality of assignments than I used to receive before I began using the discussion forum. (3:1)

At present the online applications that we use are the discussion forums and the blogs. (1:3)

I always start the discussion with an inspirational quotation or message which I get from the Internet. I believe this helps to keep the discussion forum fresh. (1:4)

The first strength is the reward the students get on engaging in online discussion forums. (1:5)

I also structure my course to allow the students to post on our discussion forums. I make it a necessity for them to post on the discussions which are regularly updated. Their participation is linked to their marks. (2:2)

I have found that the discussion forums help students engage and help me with my teaching as well. (3:2)

“Another positive is that I can easily go back to earlier contributions on the forum and refer my students to these earlier contributions and postings. These forums give me a sense of the students in my module and I can assist them better because I know them better. This is much better than waiting for the posted scripts which can take days to reach me and go back to the students. I also find that I as the lecturer am forced to think before I write anything on the discussion forum as the students have access to information and can see if I make a mistake. I am also learning a lot with my students. I believe this is the new way of learning. (3:4)

I find the students motivate me on the discussion forums and keep me on my toes! I cannot afford to slack as I have to respond to their posting and queries on the discussion forum. (4:1)
The students engage in discussions and interact very well in the discussions on the forum. (5:2)

“The students were required to research and respond to my questions on the discussion forum. I gave them a problem to discuss on the discussion forum and submit their own assignments after they have discussed the problem for 2 weeks. (5:3)

I began with implementing discussion forums. I offered the possibility of using the discussions to students who had reliable access to the Internet. The students were initially not very keen to participate and the group was small. (6:2)

I used the discussion forums to supplement my teaching as not all the students had access to Internet. It was more experimental for me and I wanted to see if it could improve the students learning. (6:3)

And then the teaching assistant actually supervises the students for me, does the assessments and runs discussion forums and the drop box and everything, so … (7:9)

We use the discussions first as a tool. We initially use the discussions as basically getting to know each other. So the biggest problem is a lot of our students don’t work online. I try and say to them myUnisa is like Facebook and the group that you’re in is your face group … Facebook group that you’re going to be studying with, so to try and get that frame of reference for them. Then we’ve used discussions for them just to say, okay, this is who I am, this is who … so initially it’s just getting to know you. And we throw out a topic like what do you think about justice? We give the image, the icon of Lady Justice and we ask them to discuss it. So it brings along their experiential worlds and they put it at the table and they discuss it with the other students. So they are then allowed to discuss their views with the other students. That is briefly an icebreaker that we use. (7:10)

So I use the discussion forum, I use it almost exclusively, basically as my mechanism by which students engage with the knowledge that they’ve currently learnt, their opinions and stuff like that. I’ve also used the self. (8:1)

We mostly use discussion forums; announcements, we put announcements regularly on for the students. (9:1)
Blogs we used with the TAs when we trained them, then they blogged. But for the students at this stage, no, it’s too much for them; they post on the discussion forums, they post there. (9:3)

I often begin a discussion and allow students to continue interacting using the discussion forums. I read the forums regularly and give my input every now and then. I introduce the discussion by stating its relevance to the course and learning outcomes. Not all my students participate as not all have access to the required technology. (2:4)

myUnisa is used to facilitate online learning at Unisa. This website uses Sakai as a learning management system (LMS). The lecturers referred to myUnisa and how they used it to interact with their students. Participants describe their interaction as follows:

I offer guidance to the students using myUnisa as a means to of supporting their learning. (1:1)

I have a total of 7 students who I actively engage with on myUnisa and I have found that it is these students who are excelling in my course. (1:2)

Each one has a specific group on the myUnisa, so they’re numbered from one to 26; so there are 26 groups. (7:8)

At Unisa we have (Sakai) and we have a certain implementation of it, certain tools and that’s what you’ve got. If you want to do online, that’s what you use. So there’s not that ... there’s not that that pedagogy can drive the technology – this is the technology and you do what, you know ... (8:23)

And Unisa’s very conservative, I think, in its approach. ICT is, you know, this is what’s there; don’t mess with it, because we’re battling to support just what’s there. They’re not, I don’t know if ambitious is the word, experimental, you know, they’re not aggressive in that experimental, kind of, mind-set. (8:24)

We wanted to hear what is the problems, because we want to improve on the ... on our course, and where’s the problems. We don’t want to sit and wait and what, what ... But one thing that came out the whole semester was myUnisa going offline. TAs working over weekends some times and they cannot get access to myUnisa. And I think also with online marking, you know, sometimes those tools are not working or we are using J Router and sometimes J Router is not working. So, yes, we’ve got frustrations with ...”(9:7)
myUnisa I think they cannot always take the load of work on the computer; I think the computer side is not always ... it’s too much. If students go too much online just before assignments, then there’s a problem, they cannot ... (9:8)

Drop box is a function on the myUnisa website for uploading information. One participant described the usage of drop box as follows:

We use the drop box as well, because I ... I, for instance, have an honours course that I’ve also opened up the drop boxes and I’ve encouraged them, I said, please; even if it’s a two line note just use your drop box. And they’re very reluctant, but some of them have and it’s fun. I say to them, you know, let’s play with this. So I sent each of them a note to say, hi, I’m your lecturer, please put something in the drop box for me. (7:15)

I like the drop box; I feel it’s nice, because a student knows that they’ve got immediate access. (7:35)

5.3.3.1 Blogging

In this study on the usage of media blends in online learning, the use of blogging had not yet been fully exploited. Blogging is a kind of learning journal for learning reflection and updates. Students can comment or link to the blogs or they can use them to organise their thoughts. Blogs also lend themselves to course evaluation options and lecturers can use them to improve their online learning facilitation as well. Three participants reflected on blogging or blogs in a superficial manner.

As the students became comfortable with the discussion forums I requested them to reflect on their learning by means of a blog. The students indicated on the feeling of being part of a group contributed to their enjoyment of the course. The students reflected on their experiences and noted that the group helped them think see new ways of looking at the topics. Students also shared links to learning resources which were on (G)oogle. The students involved in this course are performing better than the students who do not engage in online learning. (6:6)

The blogging the students create has enabled them to improve their writing and articulation skills, as they know that their work will be seen by their peers. I have noticed that before I introduced blogging as part of my course, the students often submitted un-
refined assignments. But now, the students are forced to think and research before they put up a blog contribution I know they are afraid of looking un-prepared. (2:3)

... we use blogs as well. (7:6)

... we haven’t used blogs, because we can’t mark blogs, we don’t have the tools to mark blogs. (7:27)

Gradebook is an online facility to mark and capture students’ work on the LMS. This research indicated limitations in the use of Gradebook because the teaching assistants had not been able to access it. One participant reflected on the situation as follows:

We’re not using Gradebook, because we also don’t have a licence for our teaching assistants for Gradebook. The whole training of our TAs would have been better if we’d actually taught them how to do online assessment, but we hadn’t, so they’ve actually learnt that themselves and how to use the J Router and things like that. (7:31)

The use of emails for teaching and learning is a well-known facility to exchange ideas and work. Messages can be sent or received and managed at the individual’s mail site. One participant stated the following:

We are actually ... The TAs and I are using our email, which we’re not actually supposed to; we’re supposed to communicate ... we have a site that the TAs and I talk on. But it’s so much easier, we’re now just using emails and not going onto that site any more. So that’s a bit of a problem now. But in the beginning when we needed to be there we were on that site. (7:36)

This study indicated that Facebook was not used to teach or interact with students. However, it seemed that lecturers were aware of the wide usage of Facebook as a social medium and they had tried to relate the functions myUnisa to Facebook. Participants had the following to say in this regard:

If you explain to them sometimes they are a bit overwhelmed and confused and then we will sometimes say to them, it’s almost like Facebook or ... you know. If you go every day on Facebook you can also ... you need to go online every day if you can; it’s good to go very often on the online thing. (9:9)
I try and say to them myUnisa is like Facebook and the group that you’re in is your face group ... Facebook group that you’re going to be studying with, so to try and get that frame of reference for them. (7:34)

One participant referred to groups in online learning:

Each TA has got six classrooms that he or she’s responsible for. (7:7)

Questions and answers were described as follows by two participants:

And then we start, we obviously use our discussions for Q and As; we have a Q and A that we open as well and then ... I don’t like a Q and A, I like it in a general discussion where all the students go in and realise that a question can relate to their experiences. So we try and encourage that, that they can all learn from it. And we say to them initially, you know, use this, because go and look at discussions, a lot of times things that you’re not sure about somebody else is going to be talking about. So we use the discussion there. (7:11)

We had now started with that frequently – sorry my English is ... – frequently asked questions, we started this semester also to put up that for the students to explain to them what the course is about. (9:2)

Wikipedia and wikis as a social medium to facilitate constructivist learning did not appear to be used widely at Unisa in online facilitation at the time of conducting this research. A wiki is a website that allows visitors, or in this instance, students, to edit material and it can be controlled for editing or viewing by a certain group only. Wikis are suitable for collaborative work on a project or assignment and ongoing updating information is possible. Participants had the following to say in this regard:

In my course I encourage and allow my students to use the Internet and Wikipedia as a resource. I have found it to be a valuable resource for information. I have found that both the students and myself gain the latest information about various subjects and concepts from Wikipedia. (2:1)

We haven’t, we haven’t used them, no. I think maybe in the future, but, you know, at the moment we have to relook at our assessment and, of course, some of our assessments are very difficult. So we’ve also got to look at that. But I am excited, I went to the apps presentation. (7:32)
But in terms of the Sakai tools, whether you’re using a wiki or a blog or whatever, the same effect, right, people writing their opinions down; rather keep it in one ... rather keep it in one, kind of, platform in my view. (8:2)

Figure 5.3: Theme 3: Discussion boards work best for my teaching

5.3.4 Theme 4: The students are the ones who excel and I feel motivated to further assist them

Theme 4, which dealt with motivational factors and external incentives, was small with only three nodes, namely motivation, social learning and student support. Social learning was referred to as media blends in theme 3. This theme was referred to in the other themes and participants illustrated during their discussions how they motivate their students and also what motivates them as academics to continue focusing and building the online learning environment. This theme thus captured the elements not included in the previous themes.
Motivation as such was described throughout the study and as one would expect, was a golden thread running through the study. The commitment of the lecturers was evident and they reflected as follows:

Although this is more work for me I still find this very rewarding as the students are the ones who excel and I feel motivated to further assist them. I feel like I know these students even though I have never met them face to face. (1:8)

For the last 2 years I have required my honours students to take part in online learning supplemented with receiving learning material by post. In the last year my experience as a lecturer has increased and so has my and my students’ motivation. (5:1)

I make it for marks, that’s the first thing that you do with Unisa students. So they have to participate, they have no choice but to participate. But we try and provoke, so the module is very provocative in its content, it forces students to possibly an uncomfortable space from an ethical ... but in terms of social and environmental issues. (8:10)

Social learning is possible with the emergence of the Web, Web 2.0, later editions and social media software which made both synchronous and asynchronous connections practical and easy such as blogs, chat rooms, emails, wikis, online conferencing and discussion boards, to name a few. The participants had the following to say in this regard:

I have even at one stage given the students additional assignments after reading their postings on the discussion boards. (1:7)

The students collaborated and came up with interesting and insightful assignments. (5:4)

At the end of the semester I created a group blog and asked the students to reflect on their experiences and their learning during the course of the module and all were positive and motivated to continue with discussions and blogging. (5:7)

The participants regarded online learning as a support structure for students. The participants stated the following in this regard:

I currently use the online platform to support my teaching in one of my modules which has a smaller number of students. (6:7)

I think it’s still a challenge in a way; we must remember our students are working people mostly. We have a few students that ... Because we phone them, if we see they are not very
active we will phone or say: what is the problem, where can we help, where can we assist? And I think one thing that came out is we’ve got a few mamas that have children that only have a little bit of time at night, but still it encouraged them and they feel good if they can finish the course. (9:6)

Figure 5.4: Theme 4: The students are the ones who excel and I feel motivated to further assist them

5.3.5 Theme 5: A lot of systemic challenges

Theme 5 related to the challenges that emerged during the study that affected online learning at Unisa. The participants in the study were mostly positive and motivated about online learning and the usage of media blends in teaching and learning. The challenges identified in the study were often outside the control of the lecturers and issues relating to systems. The nodes in this theme included elements such as the team approach in curriculum development, support for academics, systems problems, mobile learning, the Digiband, the disadvantages of online learning, resistance to online learning, student dropouts and plagiarism and plagiarism detection tools.

One participant referred to Digiband as follows:
But once again, the digiband [...] is a hindrance to us, which I do not like at all, because we’re sitting with copyright issues, because we have links that the copyright ... you know, we can’t use them for the digiband, so we have a problem. (7:33)

The disadvantages of online learning referred to the extra workload for academics. One participant stated the following:

The disadvantage I have found with online learning in my course is the additional work I have to do to accommodate both online students and those who do not participate online. It would be ideal if all my students were online and the course was only offered online. This would make the students have to engage. Many experience difficulty with access and I believe many do not yet know how to use the computer effectively. (1:14)

Dropouts from online learning caused problems for the lecturers. One participant referred to these dropouts as follows:

And then I’ve had my complainers that do badly, that do badly. They complain about everything and I don’t actually know how to address that. We’ve looked at it and many times they’ve had technical issues, like financial ... not financial cancellations, but their course has been cancelled for whatever reason and then they can’t submit assignments. And then after they’ve missed the first assignment due date, then they get despondent and then ... (7:25)

Mobile learning assisted the academics in their student support function, as explained by one participant:

I initially used the online platform for announcements supplemented by SMSes sent to the students’ mobile phones. (6:1)

Plagiarism in online learning was described as follows:

I have a big issue ... Turnitin, we don’t have access to any more, so I have lots of apps that I’d love to use. Turnitin, we can’t use. I don’t know what my TAs are doing, because I don’t have Turnitin anymore and they are turning in their assignments all the time for me; we have so much plagiarism. We had an assignment on ethics and we asked the students how ethical are you and they tell us how ethical they are. And then they have a section that they’ve plagiarised, so we send that ... You can’t be ethical, so... It’s an interesting paradox that we have now. So it would be nice if we had access to, for instance, Turnitin,
because apparently Unisa doesn’t have a licence any more for that, which is a big, big problem to me on many, many levels. I mean, I’m an honours ... I have an honours course I can put any of these things into, so ... And, I mean, those applications online, I do the Turnitin, I keep copies of those assignments. (7:30)

Resistance to online learning was clearly described in terms of the problems with student resistance:

So it is very sad, because some of the students take such a long time to actually get acquainted with it; it takes them one or two assignments. And instead of having fun with it, it’s, like, which icon, what do we do here, it’s submitting assignments, it’s ... it’s a bit of an issue. (7:17)

But I think this is absolutely wonderful, what you’re doing and to develop a model; that’s something I’d like you to look at and see. Because if you can make it easier for other people to go online, it’s scary, people are so scared of going online, until they realise everything is a drop of a pin. I mean, if I want to send my students an announcement it happens immediately. (7:20)

No. I’ve tried to get feedback from my TAs and I’ve also opened up the statistics button on all the sites. So I actually check to see how much student activity there is and I will then go and look and see an event and how many students are actually participating. And I know how many are in each group. So I will look at a discussion or a document that’s been posted to see how many people have opened it and then I’ll realise only six out of a group of 30 have actually opened it or ... And then I go to the discussion that related to it and I see there’re only five or six whatever, so it is very low. They do have a problem and I don’t know how you’re actually going to deal with it. You do have your shy students that don’t want to participate. (7:23)

One participant reflected on scaffolding as follows:

I posted a problem on the discussion board for the students to discuss. I was so amazed at the insights they have they even made me as the instructor do more reading on my area of specialization. (1:9)

Support for academic staff or the lack of training in online learning was described as follows:
And then how I’ve done an honours module based on what I’ve learnt from that. And I honestly, I would not want to go back; to me I feel every single lecturer should be forced to put a course on. Unfortunately, the training that we’ve received from Alice and them has not been adequate. And I’ve spoken to her; she said to me, what must we do? The only training is experiential learning; that is the reality. You need to sit with somebody that’s worked online on a daily basis and say, okay, how do I do this, how do I do that. Because it’s difficult to put into practice what you actually see, you actually have to do it to go online. (7:19)

Systems problems in online learning were evident, as explained by one participant:

It’s systemic problem, yes, huge, huge systemic problems where our assessment wasn’t set up correctly. I mean, from setting them an event for us. But as I say, the programmes haven’t been written for us and what is wonderful they are going along with us and opening up the systems for us. If we need a function they say: we’ll create that function for you to make that possible. But at the moment it is: how do you know you need the function until you get there. So this is what’s happening where we realise... The student will say: the system’s not opening for us; I can’t submit my assignment, so ... But we are dealing with those. I’d like you to have this interview with me in another six months’ time and then see, because I think it will be more positive. But we’ve had a lot of systemic challenges. (7:26)

The team approach in online curriculum development was appreciated and reflected upon as follows:

We then worked with DCLD; we worked with designers who helped us to design the basic signature of our module, which is mainly justice; we worked with library services and also people from assignments– we really had a huge group [that] worked [with] us. (7:2)
5.3.6 A framework for the different functions governing the usage of media in online learning

Based on the findings of the study as elucidated in chapter 4 and this chapter, as well as Bandura’s (2001:273) social learning framework, the researcher developed the framework depicted in figure 5.6 below. From the meta-ethnography on the experiences of lecturers and students in online learning (see table 4.7) and the phenomenological exploration of the Unisa lecturers’ lived experiences of online learning and the usage of media as represented in table 5.2, it is clear that the aim of online learning is to improve teaching and learning in ODL environments. The developed framework incorporates both constructivist and observational learning criteria.

The meta-ethnography emphasised improved learning, collaboration, discussion boards, emails, access, feedback and reciprocal learning as processes in online learning. The meta-ethnography study found that in relation to the criteria for constructivist learning, the discussion boards are the most suitable online application. There was one criterion, which according to the synthesis of data, was not effectively met by the use of discussion boards. The criterion was that of application of knowledge with feedback. Online blogs also facilitated the criterion of reflection. In this regard, discussion boards and online blogs...
could be used to facilitate the criteria for constructivist learning. However, the facilitation of the criterion of application with feedback requires an alternative online application.

In addition to constructivism, the researcher utilised observational learning as defined by Bandura (2001:273) as the grounding for her research. The functions of observational learning are based on Bandura’s (2001:265-299) social cognitive theory. Observational learning posits that learning occurs through observing people’s behaviour. The first function of observational learning is the attentional process which allows the student to determine what he or she selectively observes in the profusion of information he or she is exposed to. The second function is the retention function process. Here the learner actively transforms the information he or she has observed and restructures it into rules and conceptions for memory. The third function of observational learning is the production process. This involves the learner translating the conceptions in his or her memory into appropriate courses of action. The fourth process in the functions of observational learning is motivation. The motivational processes act as incentives for individuals to perform what they have learnt. These processes can be driven by either external incentives, vicarious incentives or self-incentives.

The researcher adopted the meta-ethnographic approach in order to synthesise previous research theses to gain insight into lecturers’ and students’ experiences of the use of online social media blends, constructivism and observational learning. Regarding observational learning, the discussion board was the online application that facilitated the attentional processes constituent. Similarly, the discussion board facilitated retention and motivational processes by acting as a means to external incentives, which is one of the constituent parts of motivational processes. Similarly, online videos were seen to stimulate attentional processes during observational learning.

The results of the phenomenological exploration also reflect on the cognitive, constructivist learning, retention, production and motivational processes. Challenges in online learning were an emerging theme and viewed challenges as systems processes, as depicted in figure 5.6 below.

Conversely, the meta-ethnography indicated a strong emphasis on collaborative action and processes in online learning which were not evident in the phenomenology. This might be because at the time of the study, Unisa had only recently introduced online learning. It is
thus clear that the University should explore collaborative learning and participation to a
greater extent in the future.

Salmon (2011:26-59) built a five–stage model for collaborative online learning from
research conducted at the Open University in the United Kingdom, with the underlying
assumption that learning involves activities on a computer. She stated further that online
learning

… includes an intricate and complex interaction between neural, cognitive, motivational,
affective and social processes … Learners online move from the known to the unknown.

Salmon’s (2011:32) five-stage model for online learning also requires interaction and
motivation, socialisation, information exchange, knowledge construction and learning
development which were in line with the model developed for this study at Unisa for
online learning and the usage of media blends for constructivist learning.

The two models complement each other and both should be used when planning online
learning using media blends for constructivist learning. It is clear from figure 5.6 that this
model could be used by Unisa academics to ensure that interactive and collaborative
learning take place when embarking on online media blends in higher education. This
model is suitable for Unisa because in 2013, the University introduced online learning, and
staff and students still need to bridge the gap between paper-based distance education and
technology-enhanced learning.

As stated above, the researcher feels that the two models complement each other, and
Salmon’s (2011) model and this model for constructivist learning and the usage of media
blends could both successfully guide online learning at Unisa. However, the model in this
study is based on Bandura’s (2001:265-299) constructivism and the experiences of Unisa
academics involved in online learning.

The model developed for online learning in this study consisted of four main processes and
an additional process underlying the model. The underlying processes were deemed key
aspects of successful online learning. The processes included factors such as cognisance of
the following: changing technology, the team approach in curriculum development,
academic staff support, systems problems, resistance to change, dropout rates from online
learning and the problem of plagiarism in online learning.
5.3.7 Components of the framework for the different functions governing the usage of media in online learning

The developed framework comprises the four functions for observational learning (Bandura 2001:272), the four constructivist criteria as explained by Baviskar (2009:543-544) and additional themes that emerged from the meta-ethnography and the phenomenological study.

The four processes of the functions of observational learning appear on the framework. In addition, the five stages of collaborative learning (Salmon 2011:26-123) feature in the second level of the framework. The rest of the framework is composed of elements that emerged in this research. Current over-riding issues in online learning impact on the facilitation of online learning. This includes the team approach in curriculum development, on-going support for academic staff and the management of systemic and software problems. In addition, other issues in the facilitation of online programmes include plagiarism and the perceived disadvantages of online learning.

The data gathered revealed the need to create an interface between the chair and the keyboard as the first step in online learning. This interface requires an understanding of learning theories amongst the facilitators of online courses. Similarly, an understanding of online learners’ skills and competencies is needed so as to provide intervention strategies were necessary.

The second step involves the bridge to online learning. The online learning programme sets off with students applying knowledge while receiving support in the form of feedback, formative assessment and scaffolding on a regular basis. The teaching assistants play a key role in this regard.

Throughout the online learning processes, a variety of online media blends are utilised to facilitate learning. This media includes discussion forums, blogs and wikis. The students are kept motivated throughout the process by receiving student support and learning in social contexts.
Figure 5.6: The functions governing the usage of media blends in online learning based on the results of the study and Bandura’s (2001:273) observational learning framework for improving teaching and learning in online learning environments
5.4 Conclusion

Although the use of media blends is evident in online learning worldwide and at Unisa, lecturers and students need to use more social media blends in online learning to improve the teaching and learning processes even more in ODL in order to support students and to ensure their success. The framework developed in this study, as depicted in figure 5.6, could be used as a guide to use social media for the enhancement of constructivist learning in a more systematic and orderly manner. The framework could guide lecturers to choose from the wide variety of social media blends to better suit the cognitive needs of their students.

Chapter 6 focuses on the recommendations formulated on the basis of the findings, the conclusions drawn and the limitations of the study.
CHAPTER 6
DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

6.1 Introduction

This study, which explored constructivism and observational learning in an online learning environment at a mega ODL university, was conducted from 2011 to 2013. It is hoped that the results can be used to inform policy development on the use of online media applications for online learning practice in higher education institutions. The research question emanating from the purpose of the study was as follows:

Which blends of online media facilitate constructivism and observational learning in online learning environments?

Three objectives emanated from the research question. The first objective was to synthesise previous research theses in order to gain an understanding of lecturers’ and students’ experiences of online media, constructivism and observational learning. The second objective was to explore lecturers’ experiences of online media in the facilitation of constructivism and observational learning. The third objective was to develop a framework based on constructivism and observational learning to guide online teaching and learning.

The research was deemed significant in contributing to the development of an online learning framework that may be used to guide policy formulation and practice constructivist and observational learning in ODeL environments. It is becoming increasingly important for online facilitators to be able to stimulate constructivist and observational learning in online learning to increase the possibility of fostering relevant skills in students at ODeL environments.

This, the final chapter also highlights the implications for practice, recommendations for further research and the conclusions relating to the study.

This study added processes such as the interface between the chair and the keyboard, the bridge between paper-based and online learning, and student support strategies and motivation in the online learning process. The framework also underscores the importance of the team approach in
curriculum development for online courses, support for academic staff to enable them to master online courses, the role of mobile learning, plagiarism and how to handle it, and lastly, how to address resistance to online learning.

### 6.2 Exploration into media blends for constructivist learning in open and distance and e-learning environments

In this section, the discussion will focus on the three objectives of the study, namely to synthesise previous research on online learning, explore lecturers’ lived experiences of online learning regarding social media blends and the framework to guide online learning.

#### 6.2.1 Synthesis of previous research theses to gain an understanding of lecturers’ and students’ experiences of online media, constructivism and observational learning

In line with the first criterion for constructivism (Baviskar et al 2009:543), students have to be able to elicit their prior knowledge of learning content and link it to new knowledge. In this study, the researcher explored the experiences of students using technology and linked these experiences to the various criteria for constructivism. The link between the students’ experiences and the constructivist criterion of eliciting prior knowledge emerged seven times in the use of discussion boards for online teaching and learning.

The second criterion for constructivist learning was that of achievement of cognitive dissonance. As with the first criterion, the researcher explored the experiences of students using technology and linked these experiences to the cognitive dissonance and the media that stimulated cognitive dissonance. The medium that stimulated cognitive dissonance was the discussion board. Reflection was inferred from the data six times and the media that encouraged reflection were those that allowed for text messaging and included blogs and discussion boards.

Regarding the functions of observational learning, one of the factors that allow modelling of observed behaviour is attentional processes. According to Bandura (2001:272), in terms of the modelled activity factors, salience, attractiveness and functional value are the key attributes. Attentional processes include affective valence, which involves salience on the part of the modelled activities. This means the modelled activity is viewed as being striking and...
conspicuous. This theme appeared twice in the data analysed, and discussion boards, videos and learning objects were the media that facilitated this process. The internet served as a source of modelling events once students realised the functional value of the resources.

The retention processes include the active process of transforming and restructuring information conveyed by the modelled events (Bandura 2001:272). One of the ways in which this occurs is through cognitively organising the modelled events. In addition, retention processes may occur by means of symbolic coding, and the discussion board proved useful in this regard. Bandura (2001:272) explains that this process involves the translation of symbolic conceptions into appropriate courses of action. Constituent processes associated with the production process include the use of feedback for conception matching.

Bandura (2001:274) identified motivational processes as a sub-function of observational learning, which emerged as the most prominent theme in the analysed data. Constituents of this theme include social incentives. The discussion board was the online social medium that facilitated motivational processes. The online social medium that served as an external incentive in motivational processes was the discussion board.

In terms of the online media for facilitating constructivism and observational learning, the discussion board featured seven times as helping to elicit prior knowledge (see 4.3.6.1), which was the first criterion for constructivist learning. Similarly, the discussion boards appeared twice as stimulating cognitive dissonance on the part of the students. The discussion boards appeared twice for the criterion of reflection, which is the fourth criterion for constructivist learning.

The discussion board featured twice as a means of facilitating attentional processes and once in facilitating retention through symbolic coding in the functions for observational learning in the synthesised theses. External incentives were the constituent of motivational processes in observational learning. The online social medium that served as an external incentive in motivational processes was the discussion board. In addition, the discussion boards were referenced 11 times as the online media that facilitated external incentives.

Online blogs as a means of facilitating constructivist learning occurred once in the data. The online blog featured as a tool for reflection on the part of the students. Regarding attentional processes as a function of observational learning, videos emerged as a facilitator of observational

The findings on discussion boards and online blogs as a means of fostering reflection, are in line with those reported by Juwah (2010:24-25) and Clark and Mayer (2008:284). However, according to Siemens and Tittenberger (2009:42), blogs may be used to declare presence, create knowledge and stimulate interaction in online environments. The findings of the meta-ethnography revealed that blogs were not used for constructivist and observational learning criteria other than that of reflection. In addition, the findings of the meta-ethnography are consistent with the findings of research in other sample cohorts that suggest media found in students’ learning environments have a positive impact on student learning (Sultan et al 2011:150).

6.2.2 Lecturers’ lived experiences of online media in the facilitation of constructivism and observational learning

The five main themes that emerged from the phenomenological interviews were the interface between the chair and the keyboard (attention processes), a bridge (retention processes) and discussion boards (production processes), which was the most comprehensive theme. This was to be expected because this was the focus of the study and indicated the different media used in online learning. The fourth theme was the fact that the students are the ones who excel (motivational processes), and fifthly, systematic challenges (current issues in online learning), which identified issues and problems lecturers experienced when facilitating online learning.

The interface between the chair and the keyboard reflected the processes employed to arouse the attention of the student in online learning. The theme described those factors and processes which the lecturer employed to keep the student interested and engaged in the study material. For online learning to be effective, the environment must enable students to interact and observe the results of their learning while responding and engaging with others. Prior learning of the students is a key factor in the learning process. Prior learning usually has a huge impact on students’ learning, but it is not clear how the students recall prior knowledge.
Another vital aspect of any learning is the cognitive capabilities of the academic staff member and of the student. Cognitive abilities were one of the nodes that were evident in more than one theme in this research. This was to be expected because cognitive elements are part of academic processes. Active learning and the provision of opportunities for in-depth learning and engagement in learning matter were identified as crucial aspects of successful online learning.

Co-creation of knowledge was an important concept in this study on constructivist learning and online media blends. The functional value of technology was referred to only briefly, because Unisa had just embarked on online learning at the time of the study. Peer interaction and interactive learning provided opportunities for sharing and checking information among students in online learning. Students could also support each other through interaction and encouragement.

We need a bridge referred to a great extent to cognitive processes in teaching and learning. This theme was renamed as a metaphor to extrapolate the words of the participants, namely “We need a bridge.” The bridge visualised the need for a cognitive process to move from print media to electronic or online learning. This theme consisted of ten nodes which included factors such as a bridge to online learning, heutagogy, knowledge application, teaching assistants, feedback, self-reflection, formative assessment and scaffolding. Students need orientation before registration for the online courses because without it learning might not happen.

In this study, formative assessment seemed to have been a significant aspect of online learning because it drove the teaching and learning process. Participants referred to formative assessment as a means of communication (in the form of feedback) to students in ODL. Heutagogy as pedagogy of student engagement in the study material, a way of sustaining the attention of the student and constructivist learning, was another node captured by participants in this study in various ways. Teaching assistants were an integral part of online learning and they had to fulfill a supportive role in monitoring student assignments and provide guidance to students on how to navigate through the online learning environment.

“Discussion boards work best for my teaching” was the most comprehensive theme. This was to be expected because the study explored media blends in online learning. This theme reflected on the production of the learning process and referred to those instruments or tools that lecturers and
students use to facilitate learning. This theme referred to media and social media which were currently used by Unisa to facilitate online learning. This theme was expected to expand as online learning progresses and more media options became available to staff and students. Discussion boards were referred to by many participants. It was clear from the findings that lecturers were familiar with discussion boards and that they used them as the major communication tool to facilitate online learning. myUnisa is used to facilitate online learning at Unisa, and the website uses Sakai as a learning management system (LMS). Lecturers referred to myUnisa and how they used it to interact with their students.

At the time of this study the use of blogging had not yet been fully exploited. Blogging is a kind of learning journal for learning reflection and updates. Students can comment or link to the blogs or they can use them to organize their thoughts. Blogs are also conducive to course evaluation options and lecturers can also use them to improve their online learning facilitation. Facebook was not used to teach or interact with students. However, the lecturers appeared to be aware of the wide usage of Facebook as a social medium and they tried to relate the functions myUnisa to Facebook. Wikipedia and wikis as a social medium to facilitate constructivist learning did not seem to be used widely at Unisa in online facilitation, at the time of the study. Wikis are suitable for collaborative work on a project or assignment and ongoing updating information is possible.

The theme, “The students are the ones who excel and I feel motivated to further assist them” was small with only three nodes, namely, motivation, social learning and student support. Social learning was referred to as media blends in theme 3. This theme was referred to in the other themes and participants illustrated during their discussions how they motivate students and also what motivates them as academics to keep on focusing and building the online learning environment. Motivation as such was described throughout the study and as expected, it was a golden thread running through the study. Social learning is possible with the emergence of the Web, Web 2.0, later editions and social media software which made both synchronous and asynchronous connections practical and easy such as blogs, chat rooms, emails, wikis, online conferencing and discussion boards to name a few. The team approach in online curriculum development was appreciated by academics and they were satisfied with the support they received at Unisa.
Numerous systemic challenges emerged during the study that affected online learning at Unisa. The participants in the study were mostly positive and motivated about online learning and the usage of media blends in teaching and learning. The challenges identified in the study were often outside the control of the lecturers and issues relating to systems. Dropouts from online learning were a cause for concern among the lecturers. Mobile learning assisted the academics in their student support function. Plagiarism in online learning seemed to be a problem for the lecturing staff and resistance to online learning was clearly a problem for academic staff and students. Systems problems in online learning were evident because not all systems functioned optimally at times.

In line with the findings in the meta-ethnography, the findings from the phenomenological study indicated that the online media evident in online learning environments played a significant role in fostering constructivist and observational learning among students. These findings are consistent with those of Sultan et al (2011:150), Gijbels et al (2009:503-513) and Dickey (2003:105-121) who used different methodologies, samples and online media. Conversely, while literature has shown that videos are effective online media for facilitating observational learning (Craig et al 2009:779-789; Charlop et al 2010:371-393; Charlop-Christy et al 2000:537-552; Geiger et al 2010:279-383; Nikopoulos & Keenan 2003:87-108; Sherer, Pierce, Paredes, Kisacky, Ingersoll & Schreibman 2001:140-148), the findings of this study revealed that discussion boards and online blogs may help to stimulate observational learning on the part of students.

6.2.3 The framework based on constructivism and observational learning to guide online teaching and learning

From the meta-ethnography on the experiences of lecturers and students in online learning and the phenomenological exploration of Unisa lecturers’ lived experiences of online learning and the usage of media, it is clear that online learning is aimed at improving teaching and learning in ODL environments. The developed framework incorporates both constructivist and observational and social learning processes.
The meta-ethnography emphasised improved learning, collaboration, discussion boards, emails, access, feedback and reciprocal learning as processes in online learning. The meta-ethnography study found that in relation to the criteria for constructivist learning, the discussion boards provided the most suitable online application. Online blogs also facilitated the criterion of reflection. In this regard, discussion boards and online blogs may be used to facilitate the criteria for constructivist learning. In addition to constructivism, the researcher utilised observational learning as defined by Bandura (2001:273) as the grounding for her research.

The functions of observational learning are based on Bandura’s (2001:265-299) social cognitive theory. Observational learning posits that learning occurs by observing the behaviour of others. The first function of observational learning is the attentional process which allows the student to determine what he or she selectively observes in the profusion of information he or she is exposed to. The second function is the retention function process. In this instance, the learner actively transforms the information he or she has observed and restructures it into rules and conceptions for memory. The third function of observational learning is the production process. This involves the learner translating the conceptions in his or her memory into appropriate courses of action. The fourth process in the functions of observational learning is motivation. The motivational processes act as incentives for individuals to perform according to what they have learnt. Motivational processes can be driven by either external incentives, vicarious incentives or self-incentives.

Furthermore, the results of the phenomenological exploration also reflected on the cognitive, constructivist learning, retention, production and motivational processes. Challenges in online learning were an emerging theme and involved challenges as systems.

Conversely, the meta-ethnography indicated a strong emphasis on collaborative action and processes in online learning which were not evident in the phenomenology. A possible reason for this was the fact that Unisa had only recently introduced online learning. It is thus clear that Unisa should explore collaborative learning and participation to a greater extent in future. As indicated in the previous chapter, the work of Salmon (2011:26-123) on technologies and her five-stage model for collaborative online learning should be used in conjunction with this model because it is clear that the Open University is at a more advanced stage in its online learning
development than Unisa. This study indicated that the media blends are not used to a great extent because online learning is still in its infancy at Unisa.

6.3 Implications for online learning practice

Online learning has grown rapidly in higher and other education in the last decade in many developed and developing countries. South Africa is still developing the skills and technology applications for online learning. In 2013, Unisa embarked on six signature courses, one course per college. Signature courses are introductory courses which introduce students to specific study fields in an online teaching and learning manner. This study included the signature courses at Unisa as well as other courses which use online learning or blended learning approaches such as online learning as well as paper-based approaches. This study mainly focused on the learning strategies used in online courses.

The findings of this study could inform Unisa’s online or technology-enhanced learning practices. The framework could be used to develop online curricula and guide the academic and support staff on the best practices to motivate students by using media blends to enhance learning and curb the dropout rates among distance education students. Another significant consideration is the use of Bandura’s (2001) social learning framework in online learning. Social learning has been accepted by educational institutions for many years as a strategy to enhance learning. Social media blends currently offer the same opportunities for social learning to take place in online learning environments. This study indicated that the lecturers and students did not make optimum use of social media blends to communicate and engage with students in online learning at Unisa.

The data suggest that even though social media blends are available to lecturers in online learning, they do not use them to engage with their students. This information has a direct effect on the way academics plan and teach their students online. Training and support for lecturers in online learning to make use of media blends could increase student achievement and encourage students to be more active, motivated and self-aware of their learning and learning needs.
6.4 *Recommendations for the practice of online learning at ODeL environments*

Even though there are many new technologies that can be deployed to enhance learning, but most of them are currently outside the control of educational institutions. A key factor that emerged in this study was that academics and students were hesitant and resistant to use those technologies available to them on the learning management system. The first and principal recommendation for this study was that all Unisa staff need to be properly trained in the usage of the online media blends available to them to enhance student learning. Media blends and technology-enhanced learning should be mainstreamed at Unisa and should be a discussion point at each and every meeting so that progress can be reported and those pockets of technological innovation in education reflected on.

The workload of staff, especially academics involved in online learning, needs to receive priority at management level. Unisa has large numbers of students for every course and the ratio between student numbers and online lecturers needs to be clarified to break down the resistance to online learning. The signature courses currently (2013) implemented at Unisa could be a significant indicator of staff to student ratios for the future.

Blogs are increasingly used as an educational tool and Weblogs and blogs have proven to be valuable tools in learning (Salmon 2001: 60). Micro-blogging for learning is also becoming a popular tool in education through Twitter and Facebook. Podcasting offers a unique opportunity for e-moderating to improve collaborative learning online. Short portable and easily accessible audio files tend to arouse students’ interest and could offer them guidelines to prevent them from repeating the same mistakes, which is one of the problems in distance education.

Wikis as editable web pages offer features that enable e-moderators and students to collaboratively and constructively develop knowledge and learning material. Wikis could ease the work of the lecturer and make it more efficient and rewarding for students and academics alike. Wikis could also lead to more independent learning on the part of students.
6.5 Recommendations for further research

The goal of the study was to explore the use of media blends in online learning and to develop a framework to guide online learning practices at Unisa and other ODL higher education institutions. Data were collected by means of a meta-ethnography on international online learning theses. Qualitative interviews then followed, exploring lecturers’ lived experiences of online learning using media blends.

The primary limitation of this research was that no research on the African continent was included in the meta-ethnography because the available data did not meet the inclusion and exclusion criteria that the researcher utilised. Unisa only introduced online learning in 2013, which meant that not many lecturers were available to share their experiences of online learning and the usage of media blends in their teaching and engagement with students.

Hence future research on this topic should include more research conducted in Africa. It is further recommended that online learning experience and development at Unisa should be mapped by using phenomenographical research studies. Future research at Unisa in online learning should also include the experiences of students and their specific needs and problems using media blends. The current online courses should be documented by using phenomenographical and action research methodologies for future reference in order to guide online learning practice at Unisa and other higher educational institutions wishing to introduce online learning.

6.6 Conclusions relating to the findings

The findings of this study extended the work of previous researchers in online learning, social learning, constructivist and the use of media blends in online learning. Although the literature emphasised the importance of media blends in the success of online learning and student engagement, this study revealed that lecturers did not use media blends to a large extent in their interaction with students. Media blends were largely ignored in online learning at Unisa during the researcher’s data collection in 2012 and 2013.
This study indicated that the introduction of online learning at universities requires careful consideration as illustrated by the theme of the attention processes which were referred to as the interface between the chair and the keyboard. As early as the curriculum planning phase plan, lecturers need to arouse the students’ attention and strategise on how to capture their attention during the course. This implies that lecturers need to plan activities, interactions and real-life problems to ensure students stay engaged in their online course. This also implies a shift in the lecturer-student ratio because large numbers of students per lecturer are simply not feasible.

Another conclusion is that staff and students need a have bridge to move seamlessly from print-based distance education to online learning. This study indicated that the staff needed support in the form of education because most staff members are not familiar with constructivism, observational learning and metacognition, which are the theories behind interactive and engaged learning. Assessment training is needed as online learning moves away from the venue-based examination.

The researcher further concluded that the learning management system and tools or options such as wikis, blogs and the use of Gradebook need to be explained and lecturers need more support to use these options. Lastly, social learning and motivational strategies in online learning need to be well planned, even at the curriculum development stage.

6.7 Conclusion

This study on the exploration of media blends for constructivist learning at an ODL university in South Africa explored the new generation of students and teachers who work and learn in technology-enhanced environments. There is no doubt that this study ignited a spark in the researcher and the participants. The researcher was excited about the thought of creating a productive and relevant environment for successful learning. Technology is changing continuously, and networked environments in education can transform teaching and learning for many Unisa students. Owing to all the new developments, online learning can create communication across boundaries, cultures and the globe. The concepts of space and time are changing, and the way in which people teach and learn in this century has a huge impact on educational practices.
This study on the usage of media blends in online learning has indicated that Unisa is doing its utmost to prepare students for the 21st century by introducing online learning. Students need skills and competencies such as critical thinking, problem solving, collaboration, communication, creativity, self-directedness, leadership, adaptability, responsibility and global awareness to function effectively in the global future. Online learning, if well developed and supported, has the potential to develop these skills and competencies in students and therefore shape them for the demanding marketplace of the future.

This study first reflected on previous research on the use of media blends in online learning and constructivism in online learning. Secondly, the experiences of academic lecturers involved in online learning at an ODL institution were explored. Lastly, and most importantly, the researcher developed a framework to address the functions governing the usage of media blends in online learning based on Bandura’s (2001:273) functions of observational learning. This framework for governing the usage of media blends in online learning for teaching and learning in an online environment together with Salmon’s (2011:26-60) work paved the way for effective use of media blends to enhance interactive and self-directive learning. This framework could also be used to assist lecturers to pick and choose media blends from the profusion of media options for online learning.
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ETHICS CLEARANCE CERTIFICATE

This is to certify that

NAME: Mrs L Mbati
STUDENT NUMBER: 32757271
TITLE: EXPLORING MEDIA BLENDS FOR CONSTRUCTIVIST LEARNING IN ODL ENVIRONMENTS
QUALIFICATION: D.Ed

HAS MET THE ETHICAL REQUIREMENTS AS SPECIFIED BY

THE ETHICS COMMITTEE, COLLEGE OF EDUCATION
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Chairperson, Ethics Committee

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Please suggest keywords/authors that will assist us to find information for your:
constructivism; online media blends; experiences of learners; knowledge creation

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Contact us: Unisa Library: IR Request Services, PO Box 392, Unisa, 0003 – fax: +27 12 4298101 – email lib-search@unisa.ac.za
25 April 2013

Ms LSA Mbati
Institute for Open and Distance Learning

Dear Ms Mbati

PERMISSION TO DO RESEARCH INVOLVING UNISA STAFF, STUDENTS OR DATA

A study into Exploring Media Blends for Constructivist Learning in Open Distance and E-Learning (ODEL) Environments

Your application regarding permission to conduct research involving Unisa staff, students or data in respect of the above study has been received and was considered by the Unisa Senate Research and Innovation and Higher Degrees Committee on 18 April 2013.

It is my pleasure to inform you that permission has been granted for this study as set out in your application.

We would like to wish you well in your research undertaking.

Kind regards

PROF. L. LABUSCHAGNE
EXECUTIVE DIRECTOR: RESEARCH
Information sheet for participants

Title of the research: EXPLORING MEDIA BLENDS FOR CONSTRUCTIVIST LEARNING AT THE UNIVERSITY OF SOUTH AFRICA

Objectives of the research: The following are the objectives of the proposed research:

1. To synthesize previous research theses in order to gain understanding into the experiences of lecturers and students regarding online social media blends, constructivism and observational learning.

2. To explore the views of lecturers regarding the role of wikis, blogs and discussion boards in the facilitation of constructivist learning and observational learning.

3. To develop a framework based on constructivism and observational learning to guide online teaching and learning.

Purpose of the research: The purpose of this research was to explore constructivism and observational learning within an online learning environment at a mega ODeL university which may be used to inform policy development in online learning practice in higher education institutions.

Terms as they relate to the study:

1. Constructivism:
   Constructivism calls for learners to recollect prior knowledge and recognize new knowledge in relation to prior knowledge. Constructivism allows learners to apply new knowledge in the form of quizzes, presentations and group discussions. Constructivism also allows learners to reflect on their learning through presentations and examinations or reflexive papers.

2. Observational learning:
   Human nature is shaped by direct observable experience through various processes which are intrinsically human.

Online media applications: Blogs, Skype, Wikis, Secondlife, Facebook, Google reader, Podcasts, Microblogs (eg Twitter), Video conferencing and Discussion Boards/forums.
PARTICIPANT CONSENT FORM
FOR RESEARCH PROJECT:
PHASE 2 (online semi-structured interviews)

EXPLORING MEDIA BLENDS FOR CONSTRUCTIVIST LEARNING AT THE
UNIVERSITY OF SOUTH AFRICA

Dear Colleague,

I wish to invite you to participate in this research project on online media blends for constructivist learning at Unisa:

(1) The participation is voluntary.
(2) You may discontinue participation at any time with no penalty being incurred. In no way will your participation affect your employment at the institution.
(3) This research does not foresee any risks or discomforts for you as a participant.
(4) You will receive feedback on the research in the form of a seminar and a copy of the publications after completion of the research project.
(5) You are free to contact me at any time during the research if you have any questions or if you need information.

Important information regarding the research method is as follows:

Aim: The aim of the study is to explore media blends for constructivism and innovative knowledge creation within online learning at a mega-university which may be used to inform policy development in online practice in higher education institutions.

Significance of the research:

To contribute to the development of an online learning framework that may be used to guide policy formulation and practice in the area of online course implementation in ODL institutions. The study will contribute to online learning practice for educational institutions involved in the provision of online learning courses through the development and testing of the best practice framework.

Method:

During this phase I will use online semi-structured questionnaires to explore the views of staff regarding which online media blends facilitate constructivist learning and observational learning. The interview question reads as follows:

May you please express your experiences regarding online media applications and teaching?

The researcher’s contact details are as follows:
Lydia Mbati. mbati.lh@unisa.ac.za Tel 012 429 6974

By appending my signature below I give consent to participate in this research on online media blends in ODL.

Date

____________________________
Improved learning

- Technology and motivation (1-0)
  - Technology and subject matter intelligence (1-0)
  - Confidence (1-0)
  - Culture of learning (1-0)

- Technology encouraged communication (1-0)
- Technology broadened student responsibility (1-0)
- Technology aids administrative tasks (1-0)
- Technology broad inspiration (1-0)

- Motivation (31-0)
- Improved learning outcomes with technology (20-0)

- Active engagement (1-0)
Discussion boards

- Discussion boards facilitated communication between students (1-0)
- Discussion boards encouraged constructivist learning (13-0)
- Discussion boards facilitated active engagement from the students (1-0)
- Discussion boards facilitated discussion amongst students (2-0)
- Discussion boards facilitated collaboration (3-0)
Email and learning

- Email was comfortable for informal communication (1-0)
- Email for engaging with content (1-0)
- Email for clarification of concepts and not for higher level thinking (1-0)

Email and learning
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Facebook <is> Root
Feedback <is> Root
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Gradebook <is> Root
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Heutagogy <is> Root
Interactive learning <is> Root
Mobile learning <is> Root
Motivation <is> Root
myUnisa <is> Root
Peer interaction <is> Root
Plagiarism <is> Root
Prior learning <is> Root
Problem solving <is> Root
Questions and Answers <is> Root
Resistance to online learning <is> Root
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Quotations: 24
Families: <none>
Comment: <none>
LY  Good morning, Neil, thank you so much for accepting to be part of this interview process, and I just wanted to find out from you if you can just give me a rough idea about the courses that you teach, the number of students that you have, when you started with the online process and just for me to have a rough idea about that, please.

NE  Sure. So at the moment the only module that I teach is sustainability and greed, it’s the signature module for the College of Economic and Management Sciences, it’s only been running for one semester so it’s the first semester. It had about 3,000 students in that semester, the idea is that it will scale quite quickly so that next year I think there’s about 20,000 planned. So as more programmes bind the signature module into their curriculum then the number of students will scale quickly. Before that I’ve taught a third year module on corporate citizenship, which wasn’t technically online, although we did use the discussion forum probably a lot more than most other modules at Unisa to try and provoke students, I guess, to think a bit more critically about the world around them.

LY  Okay. No, thank you so much. The first question I just wanted to find out from you is your experiences regarding the menu, the online platform has various applications and tools, which, from your experience of these applications and tools best allow for students to recall their prior knowledge and if...

NE  Okay, well, let me tell you what I use. So I use the discussion forum, I use it almost exclusively, basically as my mechanism by which students engage with the knowledge that they’ve currently learnt, their opinions and stuff like that. I’ve also used the self... Well, I also use the self assessment tool to
some extent, which is unusual because it’s a multiple choice question which generally isn’t thought of as a way to really get students to think critically. But I have a very different self assessment assignment which I give the students, which basically asks them their opinions, so it’s almost like a survey, if you like. And multiple choice options just present a range of possible opinions and they select from that range of opinions.

And I do that right at the beginning of the module, so it forces students to really express an opinion; they express an opinion on a bunch of issues. So that’s their line in the sand. Then they get taught a bunch of theory and at each step in the teaching of the theory we go back and interrogate perhaps one or two of the multiple choice questions in a little bit more detail on the basis of the theory. And then right at the end we get them to re-run the whole multiple choice thing and to then see how they’ve... how their experiences have changed based on this theory that we’ve given them.

So that’s why I do in these modules. I really believe in keeping it simple and partly that’s a recognition of where our students are at. It’s the first time really most Unisa students have ever done anything completely online like this. So, you know, I didn’t want to bombard them with a thousand different variations, I figured keep the technology as consistent as possible. You get used to writing discussions then at least that’s not a burden. After the first discussion forum they know exactly what they have to do, so they’re not continuously trying to figure out a new platform for expressing themselves. So that’s what I do.

LY Okay, brilliant.

NE It’s perhaps not very ambitious and perhaps as our students become more familiar with stuff, maybe there’ll be scope for playing around with other things. But it’s enough at this stage, just the discussions and, yes, and as I say, that self assessment multiple choice assignment which we do at the beginning.

LY Okay, thank you. So from what I understand, the discussion forum allows them to... it allows for feedback as well, and does it...
Absolutely, yes. From lecturer or from teaching assistant and from other students. Yes, I mean, it’s... well, I mean, we're just, kind of, wrapping up the first semester of this thing and so there’s a bunch of learning which is going on. And one of the things which I’m beginning to realise is that teaching assistants were less active in providing feedback than I would’ve liked to have seen. You know, they... maybe it’s because it was their first semester, they basically focused on doing the marking; they didn’t focus on trying to pull debate out of students. So that’s something that needs to be changed, something that’s not perfect at the moment.

And I’m not sure... Well, I mean, we’ll have to see whether it’s possible to get teaching assistants who are at such a... I mean, they're at a... I’m really not sure if it’s a: a level nine, so it’s a junior lecturer post. Most of them have just got an honours degree, maybe; actually some of them don’t even have an honours, I think some of them have just got a first degree. And so, you know, they’re very junior people in the hierarchy and so, you know, maybe it’s almost too much to expect them to be able to sustain really very intelligent, very critical debates. Because that often takes you being able to present multiple opinions yourself, you know, if a student says X you need to be able to say Y and you need to be able to say Y convincingly. And if a student says Y, you need to be able to say X to try and force students to contemplate different world views. Yes, and I think a lot of the teaching assistants are bound to a world view and are not really in the space where they can put a different world view across.

So, yes, I mean, I’ve found the feedback is probably not adequate this semester, but that’s not to say that’s not the intent to have good feedback and good engagement. And it’s not even feedback actually, it’s debate. I mean, in this module we don’t... you know, we’re not going to say, oh, that’s wrong. We might say I don’t agree with that, because of X, Y and Z, and you can say, oh well, I don’t agree with you, because if that. So that’s the point of the module; the modules not to, you know, to give them a perspective of this is truth, it’s to provoke them to think and debate and to question everything, so, yes.

Okay, so in this regard it’s... the problem is not so
much the platform, but rather the...

037
NE People, yes.

039
LY The people.

041
NE It’s an issue between the chair and the keyboard, if you like, I think that’s the... And, you know, there’s really... Yes, I mean, I some times think that we over state the value of technology, or we think that technology is going to correct for a whole bunch of things, which it’s not. Somebody asked me, you know, what’s the key to developing a good online module? The key to developing a good online module is having good content; actually it’s not bells and whistles technically, it’s having good content which you, you know, you’re trying to deliver. Actually, I think anyway. Bells and whistles from a technology perspective are great and they can facilitate the learning of that good content, but if the content’s rubbish you’re not aware [?] of anything.

042
So, I mean, I think that, you know, the... that gap... The interface between the chair and the keyboard is a crucial interface in any teaching intervention, particularly higher education, you know, you have to have somebody who can deliver complicated material at the appropriate level to students. So, yes...

045
Okay, no great. I just wanted to ask about your use of the discussions forums. How do you draw students in, how do you get them interested, is... are there certain techniques you use or...?

047
Well, I mean, I make it for marks, that’s the first thing that you do with Unisa students. So they have to participate, they have no choice but to participate. But we try and provoke, so the module is very provocative in its content, it forces students to possibly an uncomfortable space from an ethical... but in terms of social and environmental issues. So I’ll give you an example: the one assignment where we get the most riotous kind of reactions from students is about... it’s an environmental ethics issue and so we posed a question in the multiple choice questions which said: save the rhino, and then there were... the options ranged from why, let the people who want to use it pay for saving it, right through to saving it for
our children or we must save it because it’s the right thing to
do. So it’s a whole range of, sort of, perspectives on it. So we
put a very provocative picture of a dead rhino with a calf, so it
uses visual provocation, so students immediately, you know,
feel this, kind of, empathy with this, you know, very, very
tragic scene. And then we say, well, your lecturer’s opinion is
Y, which is probably the most harsh and jarring, what is your
opinion, why do you have that opinion, what do you think of
your lecturer’s opinion. And that really gets students going,
more than any of the other assignments.

048

049 But in general we try and provoke them; we try and give them
stuff which shocks them. So we have one with 20,000
students... 20,000 children die every day of poverty related
treatable diseases. And then we say, well, go and do a Google
image search on child poverty and you get these, you know,
these shocking images. So, yes, as I say we try and provoke
students to have a passionate feeling about something and
then we ask them to apply knowledge to try and address that
passionate feeling, you know, yes... There’s an Italian
Marxist, Antonio Gramsci, and his view was or he said
something to the effect that people with knowledge often lack
passion, people with passion lack knowledge, and the idea of
this is really to try and bring them together. So that’s how we
get them onto the discussion forums. It doesn’t always work;
some students are just not going to get there. It’s an NCV [？]
level 5 module, so, you know, some people have said, well,
it’s actually too early in a university degree to start giving
people so much voice. But anyway we’re trying and it does
seem to work with a significant number of our students.

050

051 You know, and then once one student starts then you can...
then you see stuff emerging, but it’s patchy. So we have 3,000
students, I reckon if 10% really got engaged with it, really,
sort of, shared their idea that this is a course that they have to
do to get marks and started really getting interested in it,
that’s probably a lot; I’m okay with it, you know. At some
stage later in their life, in their thinking they’ll hopefully
come back and think about the things which we’ve spoken
about. You know, it’s not a... yes, there’s no exact science in
getting students engaged I don’t think.

052

053 LY  Okay. Do you by any chance see any correlation
between the students that are very active in the discussions
and their performance, or...?

I mean, there would be, yes, I mean, I don’t... I can’t tell you statistically, but anecdotally those are active will get better marks, partly by virtue of the structure of the module. The module is all about... the bulk of the marks are about expressing views, are... are trying to draw it out, so it’s a very different module to, you know, to a usual Unisa module where the big part is to convey a body of knowledge, the person leaves with a big body of knowledge; this is not about transmitting a body of knowledge. I mean, we do present knowledge to them and we do hope that some of it will seep in, but really we want to see immediate application of knowledge to a particular problem and then the thinking about the problem; so we’re really looking at the thinking about the problem.

So those that are engaging, those that are participating are definitely going to get better marks, I mean, there’s no doubt about it, because they’ll just be engaged with the problems and so much of the marks are for that engagement, so, yes...

And do you see a lot of debate between them without you being so much involved with it?

Involved... It’s patchy, it’s very patchy, so I was... I mean, in the run up to delivering it for the first time I did it in a pilot with some academics and I did it with teaching assistants. So they went through the module itself and the level of engagement there was pretty good between... within, sort of, between students.

I wasn’t sure what to expect at a first year level and I’ve been possibly a little bit disappointed, but it depends very much on the group. So you know this module is divided into the groups – you’ve got groups of 30 students – and it depends who’s in the group, right. So if you have two big mouths, and especially if you have two big mouths who don’t have the same opinions, then you get brilliant debate. And so on some of the sites there’s brilliant debate which has emerged; on others there’s nothing, I mean, it’s really... you know. And you’ll tell students go and have a look at what your fellow students have said and you’ll see one person says X, the next person says Y, but with no reference to the student
beforehand, so they’re just putting down, you know, their result or their answer and that’s it.

So that’s something that I need to work on. I’m not sure how to get them to read each other’s assignments, but, you know, there are possibilities of forcing them to read other people’s assignments and then writing a comment as an assignment. But that’s something I’ll worry about for next semester. I know some of my colleagues in the signature modules have got that kind of assignment where, you know, you’ve got to do a submission and then you’ve got to write a comment on somebody else’s submission. And that’s probably what I’ll eventually do.

LY Okay. Ne, I just want to go back to something you said about the group... the groups, so you can have these power [?] relations of big mouth and then you have those that are a little bit quiet, how do you get those that are lagging or laggards, for example, who follow what the big mouth are, to get more involved or...?

NE Yes. It’s one of the observations that... I haven’t done anything yet, but I have observed that what you find is that the first reasonably intelligent opinion which is expressed often will become the prevalent opinion throughout the entire assignment.

LY Of the group.

NE Of the entire group, so it’s group think. And I’ve observed it and I’ve told my teaching assistants that they need to break that up, okay. So that’s when you need a teaching assistant who can say Y or X and argue it compellingly. If they see this group think emerging then the role of the teaching assistant must be to throw a spanner in the works, you know, and use that power to undermine the initial power, to try and get the debate going. But we haven’t done it yet; that’s the theory. You know, that’s where the teaching assistant role should become important. As soon as you start seeing a group think happening, the teaching assistant needs to get in there and break that group think. You know, that’s what I’ve done previously in discussion forum, you know, play devil’s advocate, if you like. And because of the power of the role of a teaching assistant, you know, you can break
that initial compelling argument. So, yes, that’s something which we need to work on, as I say.

First semester, we just did the mechanical stuff. We got the assignments marked; from now on I think we need to start, you know, start perfecting this and fine tuning our skills of actually getting these debates happening more effectively.

Okay. Thanks, Ne. Going forwards do you intend to start using other tools and applications like the Wikis, for them to publish and...?

Not in the immediate term.

Okay.

Yes, that’s the short answer. And again I want to see what we’ve got settled and bed it down before I really start experimenting too much. If anything, I will use... I’ll extend discussion forum, so force people with... you know, to comment on other discussions, rather than using new technology. I just think that Unisa students are just not used to, you know, this plethora of stuff which is out there; my take is you just confuse them. So I would say, no.

I had an interesting discussion on Friday last week with somebody about games and so I’m quite interested in experimenting with setting up some... a game which runs through the semester, a game which illustrates justice to students or the idea of distributive justice. But that would have to be completely off myUnisa, it would have to be developed somewhere and just linked within myUnisa. But in terms of the SACII tools, whether you’re using a Wiki or a blog or whatever, the same effect, right, people writing their opinions down; rather keep it in one... rather keep it in one, kind of, platform in my view.

No, thank you very much, Ne. Are there any concluding comments that you might have regarding your experiences with online media for teaching and learning?

I mean, okay, well, first of all it’s fun, right. I think for the first time you see the potential in a distance learning environment to have the richness of experience, or some of
the richness of experience that you might have gotten in a residential university, by virtue of sitting on the steps outside a canteen and talking about stuff, right. I mean, that's a really enriching experience that I remember when I was an undergraduate at a residential university.

LY  That's the way teaching is supposed to be.

NE  Exactly. So the teaching happens on the steps as much as it happens in the lecture theatre. So here you have the opportunity for creating these virtual steps outside a canteen and you have it in a more secure space. So even if a person is very shy they can still express an opinion, because they're protected by this internet thing. And the lecturer's sitting on the steps in theory, you know. So there's a lot of potential in this in terms of raising the bar for distance education.

The problem becomes that massification again, right, because you then start needing to shrink your groups to the 30 or whatever. When you start shrinking your groups you need teaching assistants and, as I've already said, there's quality issue with teaching... Where do you find enough good quality teaching assistants to get that discussion really happening?

So it almost solves some of the problems with distance education, but only if you're prepared to make it more exclusive, which is, kind of, you know, that tension between inclusive, kind of, open to everybody sort of thing and this exclusive, you know, Ivy League, sort of, Ivory Tower phenomenon. So, you know, that's, I don't know, that's a bit of a tension that I'm trying to get my head around at the moment. But the potential is really great.

I mean, the other thing that I've observed at Unisa... I picked up, there was a paper in Nature recently on MOOCs, massive open online courses, and what struck me about the case studies that they were talking about in the Nature paper was that in general they were developed by people who had a strong interest in the technology. So the people who were developing the teaching stuff actually were developing the software as well or had close partnerships with people. So they were actually... You know, the pedagogical, kind of, innovations and the technological innovations were, kind of, moving hand in hand. It was, oh, we need to do this to teach
this, oh well, let’s develop something to do that.

That’s very different to what we do at Unisa, right. At Unisa we have SACII and we have a certain implementation of it, certain tools and that’s what you’ve got. If you want to do online, that’s what you use. So there’s not that... there’s not that that pedagogy can drive the technology – this is the technology and you do what, you know...

LY  What you can with it.

NE  What you can within that. So, I mean, something that we’ve... I’ve been trying to work out is whether we can actually, within SEMS [?] employ some developers actually and set up a little a lab where we can actually work on. Yes, I mean, for example, my game idea, I think that’s the... it will be a fantastic thing; you’ve got a gang of developers, you get them to develop the thing and you just... You know, so you actually develop the technology to support what your dream is, rather than saying, okay, this is the idea, what can we do with that idea in this constrained technology environment. So I think, you know, that’s an interesting observation about Unisa.

And Unisa’s very conservative, I think, in its approach. ICT is, you know, this is what’s there; don’t mess with it, because we’re battling to support just what’s there. They’re not, I don’t know if ambitious is the word, experimental, you know, they’re not aggressive in that experimental, kind of, mindset. You know, it’s managed by managers as opposed to, you know, people who are, wow, let’s go and try this. So that’s another observation about Unisa, but, you know, those I guess would be my concluding experiences about online teaching at Unisa.

LY  No great. Thank you very much for your time, I really appreciate it.

NE  Okay, cool.
**Guidelines for the facilitation of online learning in ODeL contexts**

**Preamble:**

The guidelines presented, are based on the findings of a research study whose purpose was to explore constructivist and observational learning in an online learning environment at a mega ODeL university. The guidelines for the facilitation of online learning in ODeL contexts, list five principle categories that need to be in place. The first principle addresses current issues in online learning. The second principle creates an interface between the chair and the keyboard. Thirdly a bridge to online learning is created. Fourthly, relevant online media blends are utilised throughout the learning process and finally the students’ motivation is maintained throughout the online programme.

1. **Current issues in online learning**

The current issues in online learning include the lack of a team approach to online programme curriculum development, lack of support for academic staff, systemic problems, resistance to online learning and plagiarism. In this regard, a team approach to curriculum development may assist in addressing some of the other issues mentioned. In this regard, two pre-tasks ought to be initiated prior to the offering of online learning programmes. The first pre-task is the team approach to curriculum development and the second is the creation of a bridge for online learning to occur.

**Pre-task 1: Team approach to curriculum development:**

A curriculum development team composed of content specialists, lecturers/tutors, educational technologists and technical (ICT) specialist should initially be established. The constitution of this team aids in the addressing resistance to online learning as it promotes buy-in from the key players. The constitution of the team also can addressing systemic problems and the provision of support to academic staff. This is in line with the framework for the implementation of a team approach to curriculum and learning development (Unisa 2012b:15)

- Content specialists, instructional designers and educational technologists

The educational technologist, instructional designers and the content specialist are responsible for articulating content related tasks that foster and require active learning, problem solving, heutagogical approaches (Canning & Callan 2010:71-82) and interactive learning. They also articulate
assessment processes that take these approaches into account. They also articulate the prior competencies the online students should possess.

The lecturers and tutors as custodians of pedagogy employed in their courses need to be able to create tasks that enable the following practices, which aid in the keeping students engaged and help students retain knowledge during online course provision:

a. Pedagogical and attentional approaches.

The online programme instructors need to be familiar with the following pedagogical approaches which may be employed to keep students engaged and interested in the course:

- Active learning
- Interactive learning
- Peer interaction
- Collaborative problem solving
- Heutagogical principles

• The ICT specialist

The technical specialist articulates the online media and applications required for the tasks and assessment articulated as well as the scalability of the online programme. In addition, the ICT specialist will ensure functional value of ICT technology ensuring smooth movement between various online tools and platforms.
Pre-task 2: Creating a bridge

Creating a bridge means enabling the student to take part in online courses. This is necessary as students in developing contexts have diverse profiles and attributes. Two steps can be used to create a bridge for the new online learner.

a. Knowing your learner attributes

Prior to the facilitation of online courses in ODeL institutions, an understanding of learner attributes needs to be in place. Learners of online courses are diverse in areas such as computer skill levels, cognitive abilities, prior learning, language and culture. A way in which the attributes of a learner may be known is by prior testing of the students.

b. Construct a bridge

The second step in the process of creating a bridge is the construction of the bridge by the offering of courses either autonomously or in collaboration with partner educational institutions. The courses should be designed to address the deficiencies identified in the prospective online student. Areas of focus may include digital literacy and language courses. If necessary, online lecturers and tutors may need capacitation in pedagogical approaches: Active learning, Interactive learning, Peer interaction, Collaborative problem solving and Heutagogical principles.
Once the team has articulated the tasks mentioned and the pre-tasks have been accomplished, 4 criteria for the facilitation of online courses in ODeL institutions may be applied. The first criterion is that of creating an interface between the chair and the keyboard. The second is walking the bridge, the third is the utilisation of appropriate online media and the fourth is keeping the students motivated.

2. **The interface between chair and keyboard**

The interface between the chair and the keyboard can be achieved by providing provocative stimulating content. This content gets the attention of the online student and stimulates debate. The provocative content may be in the form of a visual, a current news headliner or a controversial quotation. This content should be linked to the learning content of the online programme. The content ought to be linked to the students’ prior knowledge. In addition, the online tasks should be structured to require peer interaction and problem solving.

3. **Walking the bridge**

The walking of the bridge enables the students and the online facilitators to apply knowledge. In this criterion, the student receives on-going feedback and scaffolding. The teaching assistants and tutors play a key role in the facilitation of this phase.

4. **Online media and discussion forums**

Although this criterion is listed as a third criterion, it is applicable to all the other criteria as it serves as the vehicle for the facilitation of the other three criteria of creating an interface, walking the bridge and student motivation.

These are the online media that facilitate the learning process and they include discussion forums, blogs, wikis and email.

5. **Student motivation**

Student motivation should be given throughout the learning process. Facilitators of online courses may contribute to the motivation of students to engage in online activities by:

- Social learning
Tasks that require students to work in groups can contribute to peer motivation amongst the students

- Student support

On-going cognitive, affective and social student support available to the students serves as a means of keeping students motivated
Guidelines for the facilitation of online learning in ODeL institutions in heterogeneous contexts

Addressing current issues in online learning facilitation

Pre-task 1: constitution of a team approach for curriculum development and instructional design
Pre-task 2: creating a bridge to facilitate online learning
  o Knowing your learner attributes
  o Constructing a bridge

The interface between chair and keyboard

Stimulating content
Prior knowledge
Peer interaction
Problem solving

Walking the bridge

Application of knowledge
Feedback
Scaffolding

Student motivation

Social learning
Student support

Online media blends
(discussion forums, blogs, wikis, email)

Ongoing student motivation