Adoption of Learning Management Systems among Information Technology educators at a Rural South African University: an Activity Systems Perspective

Research submitted by

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ABSTRACT

The growth of ICTs in education is a reflection of societal change. The demand for Higher Education Institutions to produce graduates who are equipped for the 21st century is a primary concern to all stakeholders in the education and development system. In as much as there is a drive to adopt emerging educational technologies there needs to be mature research which unpacks adoption. The focus of this research is lecturers and how their perceptions about LMS influence the rate of uptake in the LMS adoption process. It is important to identify the factors which influence lecturer perceptions. Through a qualitative investigative approach on a single case and guided by an Activity Theory framework, this research manages to interpret key sources of tension and contradictions which highlight the factors which influence lecturer perception. It is important to note that structural mandate does not always yield quality results and therefore it is important to establish perceptions held by key stakeholders in the LMS adoption process.

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1. CHAPTER 1: INTRODUCTION

Introduction

The South African government is in a continuous process of widening the agenda for transformational change in education to enable equal access to quality education for all (DHET, 2010). How do Higher Education Institutions (HEIs) meet the growing demands for quality education yet remain burdened with resource constraints due to increases in student enrolment and greater demands for 21st century learning?

Information and Communication Technology (ICT) has progressed over time into an influential part of almost all realms in our daily lives (Johnson & Smith, 2010). The evidence of this influence in the education sector can be seen by the continued transformation of ICT tools into educational tools in order to overcome the demands for maintaining quality, improving standards of education, and improving the learning and teaching experience (Johnson & Smith, 2005).

Learning Management Systems (LMS) such as Blackboard and Moodle are examples of educational tools that have attracted the interest and investment from HEIs around the world because they are said to offer a means to improve the teaching and learning experience (Blin & Munro, 2008). The improvements in access to and lowered costs in data communication globally has possibly assisted in making e-learning a more viable option for Higher Education (HE). However, there are a number of infrastructural barriers/challenges that can affect the LMS adoption process in any HEI in general and at Walter Sisulu University (WSU), in particular. Lecturers conduct themselves within the teaching and learning sphere through influences from cultural-historical artefacts they have acquired over time (Roth & Lee, 2007). Depending on their cultural-historical artefacts lecturers have varying degrees of willingness and ability to engage with ICT in the teaching and learning process and hence creating human barriers that affect the LMS adoption process.

The transformation of expectations of learner abilities has compelled HEIs to revisit teaching and learning approaches in order to produce 21st century learners. This involves integrating ICT into traditional educational practices so as to prepare students to adapt to the needs of the information age (Gonçalves & Pedro, 2012). E-learning adoption is a choice worth considering by HEIs because it affords various forms of blended learning. It is therefore

necessary to utilize an appropriate adoption framework which will positively affect the teaching and learning process. This research intends to investigate the perceptions held by teaching staff towards the institutional drive for the adoption of LMS in their teaching and learning system. What influences their perceptions and how does this influence their use of the LMS to overcome the challenges of multi-site course delivery? This research will focus on the contradictions that arise from the tensions and constraints that characterize the perceptions of LMS adoption within the institution.

An integration framework which is widely used in Europe is Roger's innovation diffusion theory (Gonçalves & Pedro, 2012). This framework speaks of an Innovation Decision Process (IDP) which contains five stages namely: knowledge, persuasion, decision, implementation, and confirmation (Rogers 2003, cited in Gonçalves & Pedro 2012). The interest of this research lies between the persuasion and decision stages. In the persuasion stage, this research looks into the attitudes held by teaching staff towards the innovation and how this leads to the decision on whether they accept or reject the innovation. The theory further alludes to key factors which contribute towards the rate of innovation adoption namely: relative advantage, compatibility, complexity, trial-ability, and observe-ability (Rogers 2003, cited in Gonçalves & Pedro 2012). These factors contribute to the overall perception held by teaching staff towards an innovation and its rate of adoption.

Where necessary, most terms in this study are clarified as they are introduced. It should be noted that in this study the terms "*educator*", "*lecturer*", "*teaching staff*" and "*academic staff*" are used interchangeably.

Context

This research was conducted at Walter Sisulu University (WSU) which is an Eastern Cape based comprehensive university that was formed through a merger of three institutions comprising of two technikons and one traditional university. The institution has four campuses and multiple remote delivery sites which are geographically dispersed across the Eastern Cape region and cover both rural and urban areas. The limited resources, great distances between delivery sites and the diversity of its students make it challenging for the institution to meet not only its mission and vision but also the strategic goals set up by government through the Department of Higher Education and Training (DHET). This multi-site environment makes it costly, complex and challenging for the university to offer similar

quality standards and learning experiences across the delivery sites. A strategy to enhance and maintain a defined standard of quality education through effective use of ICT in teaching and learning exists at WSU (WSU, 2006). An LMS integration strategy is currently being implemented into teaching and learning in order to create a blended learning environment (WSU, 2009). The motive for implementing e-learning was to improve throughput rates and produce 21st century graduates (WSU, 2009).

The South African government and the Dutch government signed an agreement which outlined domains of intervention in South Africa, one of the domains of the Netherlands Initiative for Capacity Development in Higher Education (NICHE) programme was ICT integration in HE through the Netherlands Universities Foundation for International Cooperation (Nuffic) (Nuffic, 2012). The decision to adopt LMS integration within WSU came as a result of Senate's approval to adopt the university's Access, Retention and Throughput strategic plan (WSU, 2009). This plan outlined the need for ICT integration in teaching and learning (WSU, 2009). The Centre for Learning and Teaching Development (CLTD) at WSU was tasked to formulate an implementation strategy. The decision to use Blackboard as the institutional LMS was made based on findings from a needs analysis conducted by WSU's e-learning collaboration partner, the University of Groningen in the Netherlands (WSU, 2009).

This research confines its investigation to the experiences of staff in the Information Technology (IT) department. One reason for choosing the IT department as the source for the research sample was that in 2009, the IT department was selected to participate in the pilot phase of the e-learning implementation strategy. The other reason for this decision was based on the fact that the researcher belongs to the department and therefore has a greater understanding of the research context.

Students at WSU come from diverse backgrounds and live in different settings (rural and urban). Academic staff are predominantly from within the Eastern Cape region and are also from diverse backgrounds and live in different settings (rural and urban). IT courses at Diploma and Bachelor of Technology level are offered at three delivery sites that are geographically far apart. All courses in each delivery site are taught face-to-face. Students studying for the same qualification across all delivery sites write the same assessments (tests, exams, projects and assignments) at the same time but at different venues, therefore there is a

need to maintain synchronicity, quality and consistency. The researcher has observed the growing trend in advanced ICT use by staff and students to communicate through various social networking platforms such as Facebook, LinkedIn, MxIT and WhatsApp. Despite being situated in a rural setting, ICT use seems to be growing within a social context. The research of Brown & Czerniewicz (2014) supports this observation through the results of a digital ethnography study of 23 students attending South African universities. The results of this research informs this study by way of the fact that six to eight months into a first year student's academic life, they are compelled to use ICT for learning through social and academic forces.

Staff and students have varying degrees of digital literacy within this educational context, majority fall into the medium to low group due to socio-economic reasons. Through the mission statement the institution attempts to bridge the digital divide from the moment the staff and students begin to work and/or learn at the institution.

Research Problem and Question

HE in South Africa is looking at ICT to play a supportive role in improving the access to quality education and developing quality 21st century graduates. DHET has a vested interest in ensuring that HEIs adopt an ICT integration strategy and this is evident by initiatives such as the NICHE programme. LMS adoption is an example of an ICT intervention in HE, most stakeholders in education are aware of the benefits that LMS can bring to the teaching and learning experience but the rate of uptake amongst educators where LMS is implemented is generally low. The identification of the local realities of actual educators which influence the low and sometimes slow successful LMS adoption rate, this is the problem space that this research investigates.

The introduction and research context described in previous sections provides a motive for institutional LMS adoption. The core intention of this research is to understand the underpinnings which inform a lecturer's perception towards LMS adoption in teaching. The primary research question to be answered is, "*What influences IT lecturer's perceptions of LMS use or lack of use in Higher Education?*"

The research context will provide a source of experiences from a historically disadvantaged HEI. This study will add onto past research which has investigated various aspects of LMS

adoption, but provide key factors which influence lecturer adoption behaviour of ICT adoption from a rural based HEI's perspective. Consequently, this research will identify the tensions which exist between elements of the Activity System.

Rationale

The complexity and challenges of running the same academic programmes across delivery sites which are geographically far apart is high. The institution needs to implement mechanisms and policies that ensure students receive a quality education experience and fairness of access to teaching and learning resources no matter which campus they study from. The Internal Programme Review Processes and Procedures Policy is still in draft form but it does highlight mechanisms that are in place to assess whether qualification offerings are in line with quality benchmarks set by Higher Education which informs bodies such as the Higher Education Quality Committee (HEQC).

This research follows on past research which looked into the phenomenon of:

Low innovative and active use of LMS in HE (Christie & Juardo, 2011); this research was a Swedish case study which investigated the phenomenon of a lack of innovative LMS use by Engineering Department lecturers who either did or did not receive training in interactive LMS integration such as discussion forums. In this research, the common factors found to influence the lack of use or limited use was time and support;

The effects of structural influences on academic staff intentions to use LMS in teaching and learning (Macharia & Nyakwende, 2010); this research is a case study on a Kenyan university and it investigates the phenomenon of how top-down LMS adoption can influence perceptions of use by academics. The researcher uses Technology Acceptance Model (TAM) to investigate the factors that influence the diffusion and infusion of LMS by lecturers;

Understanding that it is not enough to just look at the patterns of use through learning analytics to assess the effective use of LMS (Macfadyen & Dawson, 2012). This investigation was conducted at a research-intensive HEI and it looked into best practice for determining success factors for LMS adoption. It concludes that when strategically planning LMS adoption it is important to look at more than just what the numbers are saying but to look into other influences that determine the success or failure of LMS adoption; and

Resistance to change with respect to pedagogical practice (Blin & Munro, 2008). This research uses Activity Theory (AT) to investigate the pedagogical tensions/contradictions that occur during LMS adoption that lead to success or failure of LMS adoption.

In 2002, Monash University in Australia embarked on an ambitious investment to get 8500 staff trained to use their institutional on-line learning tool, WebCT. The research challenge was how to gauge quality education was being derived from the tool and whether educators were equipped with correct training (Weaver, et al., 2008).

These articles provide evidence that there is still much interest in understanding what needs to actually happen in order to make LMS adoption successful. The results of this research will identify the underpinning tensions and contradictions that influence the perceptions of LMS use or lack thereof. This research should be of interest to:

- CLTD and Education Technology Innovation Unit (ETIU), as it will provide some insight for refining their strategic plan with respect to effective LMS adoption
- Head of Department (HoD), as it will assist in better anticipating the needs of the department in terms of improving the state of ICT readiness and changes to instructional design. Classroom sizes are constantly growing and there is a need to ensure that quality of education is maintained through the use of mediating tools
- Academics will gain insight into what others are doing or are not doing with ICT in Education. It may serve as a source of motivation for them to engage with ICTs in teaching and learning praxis

Theoretical Framework

It is important not to lose sight of the fact that all stakeholders need to buy into the idea of LMS in order for it to be an effective mediating tool. How does a researcher investigate the motives and human behaviour when considering buy-in? Mlitwa & van Belle (2010) speak of the importance of using a research framework that seeks to interpret and understand the relationships between the scientific (machine) and social science (human) phenomenon when dealing with the adoption of scientific instruments in a social science realm. This means that a researcher should interpret the elements of interaction by looking at the factors of influence that exist within a context. In their research Mlitwa & van Belle (2010) consider AT as a framework to research on LMS adoption in Higher Education.

Research which concerns itself with analysing the actual conditions of human activity and interaction with tools makes use of AT. From the AT perspective, Human Computer Interaction (HCI) within Information Systems (IS) research is seen as an activity system (Mlitwa & van Belle, 2010).

AT is based on the works of Vygotsky which is based on social mediated action, the premise is that activity objectives are achieved through mediation of culture and artefacts (Engeström, 1987). This research makes use of the third generation AT model which contains six elements of the mediational structure of an activity system: Subject; Mediating Tools; Rules; Community; Division of Labour; Object (Russell, 2004). In order to establish the source of lecturer perceptions which influence the degree of engagement with LMS in teaching it is important not to look at these sources in isolation. AT provides a framework which helps identify sources of influence through tensions which exist between elements in an Activity System. Interactions in society do not confine themselves to only one activity, which means that there are multiple activities that are in play which should reflect the complexity of life (Russell, 2004). The third generation AT model discusses the existence of relationships within and among elements of Activity Systems.

The context of this research is unique in that it focuses on the adoption of LMS in a rural and urban-based multi-site comprehensive HEI in South Africa. The literature that will serve this research is on the use of AT as a lens to understand the underpinnings which influence educator perceptions towards LMS use or lack thereof; blended learning as a favourable shift from traditional university teaching and learning experiences; and LMS adoption in Higher Education.

Methodology

The orientation of this research is interpretivist, because it investigates the nature of the way in which the research sample group does things within their context (Kelliher, 2005). AT allows the research to identify the lecturer's feelings which occur in the complex process of LMS adoption and present points for interpretation. Interpretive research has shortcomings which may weaken the strength of research findings, there is a need to ensure the results are valid, reliable, generalizable, and/or legitimate (Kelliher, 2005). To overcome some of the shortcomings of interpretive research Maxwell (2008) promotes the use of triangulation as a technique that is useful in strengthening interpretive research. This research conducted a

detailed survey with lecturers from the IT department and also conducted an interview with one lecturer in order to provide a narrative which illustrates an academic's LMS adoption experience.

Thesis Structure

The research is a collection of six chapters. Chapter 1 provides an overview to the research. It outlines the research problem, rationale, framework selection and research design.

Chapter 2 forms the first part of the literature review. It discusses the background of AT and its application in past research works. This chapter lays the foundation of the interpretive approach.

Chapter 3 is the second part of the literature review. It discusses the background to ICT adoption and in particular LMS adoption. It provides further insight into the research context and how LMS integration is actioned.

Chapter 4 provides an in-depth view into the constructs of the research approach and methodology. It outlines the selection choices of research participants, data collection instruments and data analysis techniques.

Chapter 5 forms the initial results from the data collection instruments. Within this chapter key tensions are identified and unpacked.

Chapter 6 is the conclusion of the research process. It provides a map between research purpose, execution and findings. As part of the conclusion limitations are discussed and recommendations are made for future research work.

Conclusion

The introduction of this research alluded to the fact that there is a need for HEIs to re-evaluate the academic practice. Due to growing enrolment figures and constrained resources, HEIs are looking at ways to best alleviate the stresses associated with the demands for quality education which should equip 21st century learners. In South Africa, DHET is encouraging academic institutions to apply the benefits of ICT in their academic agenda. The integration of ICT tools in education such as LMS, is growing globally.

The emphasis of this research is to identify key factors which contribute towards the perceptions held by lecturers in LMS adoption, these perceptions help establish the use or lack of use of LMS in teaching. AT is the framework used in this study which helps guide the research process by continually presenting hints in the form of contradictions which establish the key influences that feed the motive for lecturers to adopt LMS in their teaching practice.

2. CHAPTER 2: LITERATURE REVIEW

Introduction

This section discusses in detail the theoretical framework and the learning theory within which this research is based. It is essential that the reader understands the stand point of the researcher with respect to what learning is and how it is achieved. Vygotsky's theory of learning is used in this research as it provides an understanding of how a lecturer's degree of learning about integrating Information and Communication Technology (ICT) in education can reflect their ability to transform their pedagogy in order to adequately accommodate LMS in their teaching and learning practice. AT is used as the research framework because it is a theory that unpacks the relationship which exists between the subject (lecturer) and the educational tool (LMS) when they work together to achieve a defined objective (teaching). The researcher believes that it is important for the reader to understand the underlying principles of AT so that they can appreciate its' application within the research process.

Keyword(s): Vygotsky; Engeström; Activity Theory; Application of Activity Theory;

Learning and Activity Theory

The first generation of AT centres itself on the premise of a structured process of mediation by a culturally more advanced peer (Vygotsky, 1978). Within any learning context the social interactions that occur in learning are defined by activities (Kaptelinin & Nardi, 2006). An activity is realized through concrete actions which are driven by goals that are framed by individuals. An activity is comprised of a subject, object and mediated tool(s) (Roth & Lee, 2007). Figure 2.1 illustrates the relationship that exists in a socio-cultural learning theory on which Vygotsky's theory of learning is founded. The triadic representation of mediation is illustrated in Figure 2.1 which is also known as the first generation AT model.

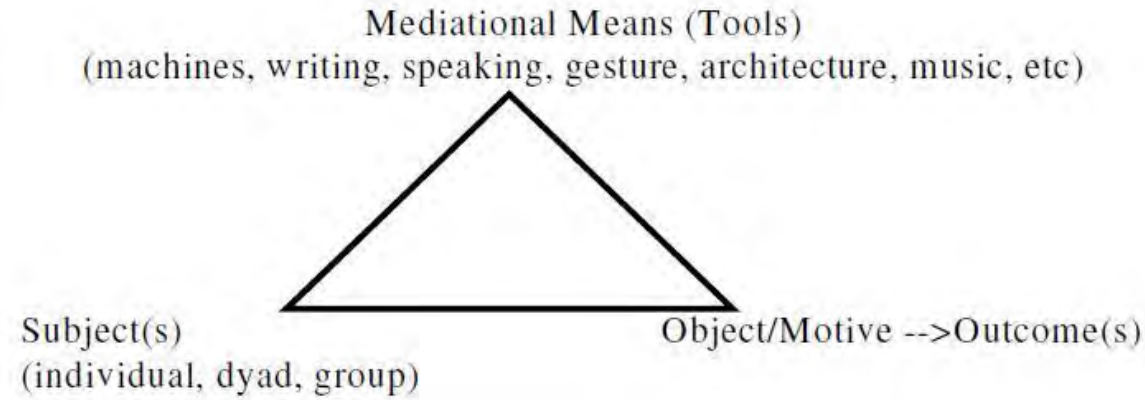

Figure 2.1: First generation Activity Theory model (Adapted from Engeström, 1987:64)

Figure 2.1 is a representation of how a lecturer (*subject*) interacts with the world (*objects*) by means of historical cultural artefacts and *mediation tools* to produce a change in state (*outcome*) (Roth & Lee, 2007). The hierarchical structure of an activity is a concept brought in by Aleksey Leont'ev who believed that an activity is made up of a collection of related actions. These actions are composed of operations (Kaptelinin & Nardi, 2006). An operation is a fossilised or automatic way of doing something, where no thought is required as it has become instinctive in nature. Figure 2.2 illustrates the three-level model of activity.

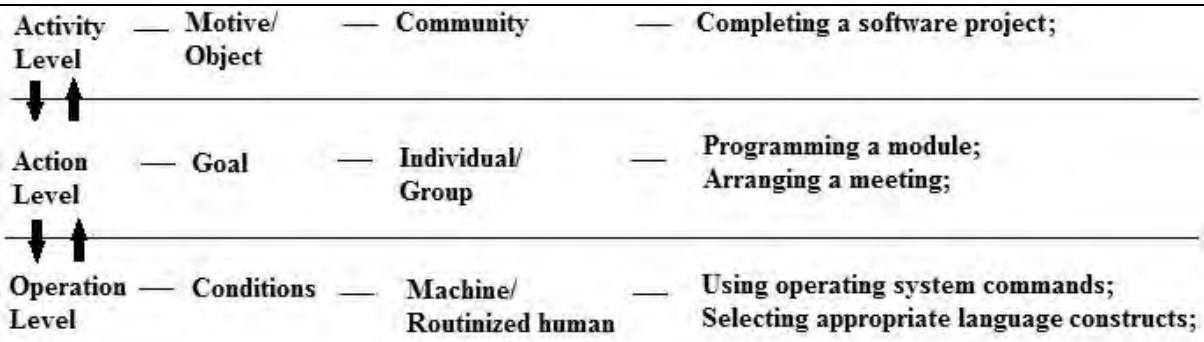

Figure 2.2: Hierarchy structure of activity (Adapted from Kuutti, 1996:33)

There must be a motive behind undertaking an activity, in other words what is the collective or individual reason for being part of an activity? In order to achieve an end result which an activity represents, a set of goals are defined which collectively result in achieving the activity outcome. The operations are the units of work that need to be undertaken to meet the needs of the action and are determined by set conditions and tools of action (Engeström, et al., 1999). Figure 2.3 illustrates the second generation of the AT model which includes elements not present in the first generation model. These elements provide a more comprehensive framework which represent the social/collective elements in an activity system (Engeström, et al., 1999).

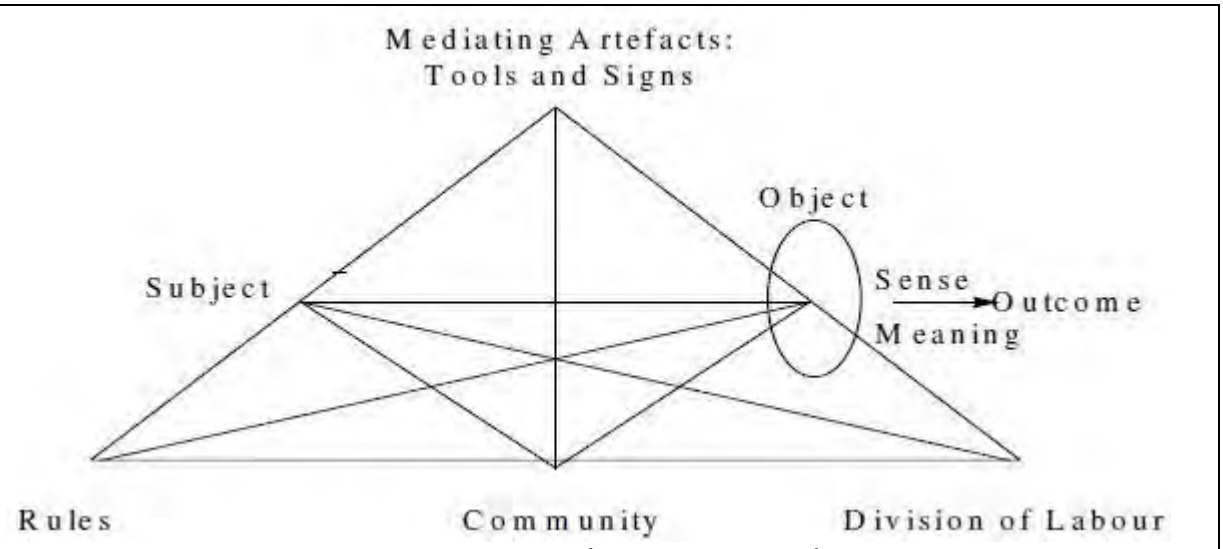

Figure 2.3: Second generation Activity Theory model (Engeström, 1987:78)

The elements that are included are rules, community and division of labour. In any social system there are traditions, rituals and rules which govern how the elements of a system operate. The subject together with other members of the *community* in the Activity System follow these *rules* in order to achieve a collective outcome (Engeström, 1987). Members of

the community are allocated roles and responsibilities which lend towards achieving a desired outcome. The awarding of roles and responsibilities is the *division of labour*.

- ***Subject*** *is the individual or group who form the purpose of the system. In this research the subject are the IT Lecturers*
- ***Mediating Tools*** *are the means through which a subject engages with the object in order to achieve a desired outcome. In this research the mediating tool is the LMS*
- ***Rules*** *what are the codes of interaction or guidelines under which a subject, community, tools and object may function? These range from Institutional, departmental to pedagogical policies/frameworks that standardize LMS use within the academic institution*
- ***Community*** *is the society in which the activity system operates. This is the university community across all delivery sites*
- ***Division of Labour*** *are the roles that are distributed to defined groups within a community. This is the roles of lecturer, student, ETIU, ICT department etc.*
- ***Object*** *is the problem space that defines the purpose of an activity. Objectives relating to adopting of LMS*
- ***Outcome*** *is the goal or objective of the activity. LMS adoption has a multi-faceted target which in this context is to develop quality 21st century graduates; improve equal access to quality education across delivery sites; and improving retention and throughput rates*

The purpose for understanding the evolution of Vygotsky theory is to appreciate what is entailed when discussing the concept of an activity. There is a distinct difference between an activity and a task. A task leads to a learner being good at problem solving within a school context and an activity leads to a learner being good at problem solving within a real world context (Roth & Lee, 2007). In order to achieve deeper learning it should be understood that,

> *Human cognition is situated and distributed across social settings and acts in concert with diverse changeable artefacts* (Roth & Lee, 2007)

Understanding how to identify learning and how people learn assists in determining whether the infusion of ICT into an educational system can result in achieving greater cognitive development in learners. In this research, ICT becomes the mediation tool which enables a subject to engage with the object in order to change a state of being. Since learning does not

occur in isolation it is important to be aware that subjects participate in more than one activity system and therefore bring with them a history of diverse involvements (Russell, 2004). Once a subject begins to negotiate their way through an activity through various modes of interaction they change (learn). There are various influences that characterize the rate of change that takes place within a subject. These influences are the internal and external contradictions that exist within any teaching and learning process (Russell, 2004). Russell (2004) makes the following contribution about the possible changes that may occur over time within activity systems due to shifts that may exist with respect to motives, actions and mediated tools:

> *Introducing computers for example, has often changed the activity of teaching and learning, as was the case in my course. But there were many other tools in the course, both physical and conceptual – readings, images, video, theories, questions, and so on which had to be re-thought in relation to the computer tools.* (Russell, 2004)

In the same way that educators need to be knowledgeable of the student's learning ability and history of learning interactions in order to create learning activities that will bring about cognitive development. The ETIU at WSU needs to be knowledgeable of the lecturer's ability to use LMS and apply instructional design principles in order to create learning activities in their workshops which will assist a lecturer to best integrate LMS in their teaching. Contradictions arise from conflicts between elements within and between activity systems (Russell, 2004). The existence of contradictions identifies the occurrence of a change in the system. Roth & Lee (2007) make the following observation,

> *When inner contradictions are conscious, they become the primary driving forces that bring about change and development within and between activity systems. Generally overlooked is the fact that contradictions have to be historically accumulated inner contradictions, within the things themselves rather than more surface expressions of tensions, problems, conflicts and breakdowns.* (Roth & Lee, 2007)

There is no doubt that infusing ICT into the education system will bring about contradictions, the way in which contradictions are identified and resolved will ultimately influence the success or failure of computer mediated learning. These contradictions will exist for both student and lecturer, the core focus of this research is to establish and understand the educator-based contradictions.

Application of Activity Theory in Research

This section discusses how various researchers have effectively utilized AT as a framework to critically analyse artefacts in use. Bødker (1995) in her research affirms that AT allows you to analyse the relationship between the development of the individual and the society in which the person exists. Since an activity is mediated by tools in order to achieve an objective therefore AT is an appropriate framework to use because it provides a researcher guides for categorizing actual development without knowing exactly what to look for (Bødker, 1995). Bødker's (1995) research attempted to outline a technique for the mapping of use situations that have been recorded on videotape and show how focus shifts and breakdowns are instrumental in analysing human-computer interaction. Bødker (1995) concludes by saying "*Activity theory allow us to be instrumental without being reductionist in our studies of human computer interaction. It helps structure analysis without totally prescribing what to look for. It also means that we are constantly reminded in our analysis of the context and history of the actions and operations that we are looking at, thus preventing us from viewing the interaction in isolation.*"

Research conducted by Mlitwa (2007a) in which the researcher explores possible frameworks for the analysis of object-directed applications of technology in teaching and learning. The research investigates the use of LMS within e-learning. The analytical frameworks that were compared to establish the most suitable was between AT and Actor Network Theory (ANT). The researcher highlights the shortcomings and strengths of both frameworks and concludes that ANT proposes a symmetrical relationship between technical and human actors which is not a true reflection of reality because of human's cognitive mental capacity. It is therefore more appropriate to view the technical and human relationship with an AT lens because it does not emphasis on the tool as being value-laden as ANT proposes thereby offering a more realistic analysis of interactions within the activity system.

Mlitwa & van Belle (2010) speak of the importance of using a research framework that seeks to interpret and understand the relationships between the scientific (machine) and social science (human) phenomenon when dealing with the adoption of scientific instruments in a social science realm. This means that a researcher should interpret the elements of interaction by looking at the factors of influence that exist within a context. In their research Mlitwa & van Belle (2010) consider AT as a framework to research on LMS adoption in Higher

Education. Research which concerns itself with analysing the actual conditions of human activity and interaction with tools makes use of AT. From the AT perspective, HCI within Information Systems (IS) research is seen as an activity system (Mlitwa & van Belle, 2010).

Henneke & Matthee (2011) investigate the barriers of e-learning use for corporate training within a South African context. AT was used as a framework in this research in order to get a holistic understanding of the factors contributing towards adopting e-learning in a corporate environment. The use of AT by Henneke & Mathee (2011) provided a balanced lens through which they were able to identify factors stemming from social and technological perspectives within a corporate African context.

Rambe (2012) uses AT as a theoretical lens for exploring social media in a study of computer-mediated interaction. The research was to investigate the potential of how Facebook could help scaffold student cogitative processes and promote academic engagement through question based consultation (Rambe, 2012). The results of this research does assert the potential of cognition but most interesting are the contradictions that are identified through AT. The choice of using AT as an appropriate framework is based on its extensive use by researchers for: "*technology's mediation of knowledge construction, emergence of reflective and expansive learning from explicit play, the complexities arising from the lack of a unifying theoretical and methodological framework in CSCL and use of AT to inform the design of new environments and support mobile learning.*" (Rambe, 2012). Although Rambe (2012) highlights limited available research anchored in Social Networking Environments (SNE) using AT as a framework, the motivation to use AT as an interpretive framework is promoted because of it is a crucial analytical tool for grasping the mediating role of technology (Rambe, 2012).

Butler & Cowan (2013) use AT in their research on mobile learning where the subject is the teacher. The researchers state that there is limited research output on mobile learning with a primary focus on the teacher. According to Butler & Cowan (2013) most research on mobile learning places the student as the focal point of study although there is a need to understand the perceptions and influences of teachers. The research conducted by Butler & Cowan (2013) investigates the distribution of power and control using an adaptation of AT. Their proposition is to develop a language of description within an activity system which allows for the parameters of power and control to be considered at structural and interactional levels of

analysis (Butler & Cowan, 2013). This resulted in a 3D model as a representation of the m-learning activity system, where student and teacher roles are represented in order to obtain a holistic view of m-learning in the action research (Butler & Cowan, 2013). In conclusion "*This study is the first to provide a unique insight into the complexity of the teacher–pupil power dynamics that exist over the duration of a full academic year in an examination-focused post-primary classroom, and it offers an original framework to prompt teachers' thinking about the dynamics in their classroom practice*" (Butler & Cowan, 2013).

Although in a school context, Lim (2002) proposes the use of a more holistic approach of studying ICT in schools by adopting a sociocultural perspective. The motive for a holistic approach was due to the fact that most research at the time studied ICT in isolation of its broader context and thereby removed critical factors that would contribute towards understanding the process and outcomes of infusing ICT in education. Lim (2002) concludes that AT has been successfully used to analyse successes, failures and contradictions in complex situations without reductionist simplifications. Figure 2.4 illustrates a holistic view of the context within which an Activity System represents ICTs in schools.

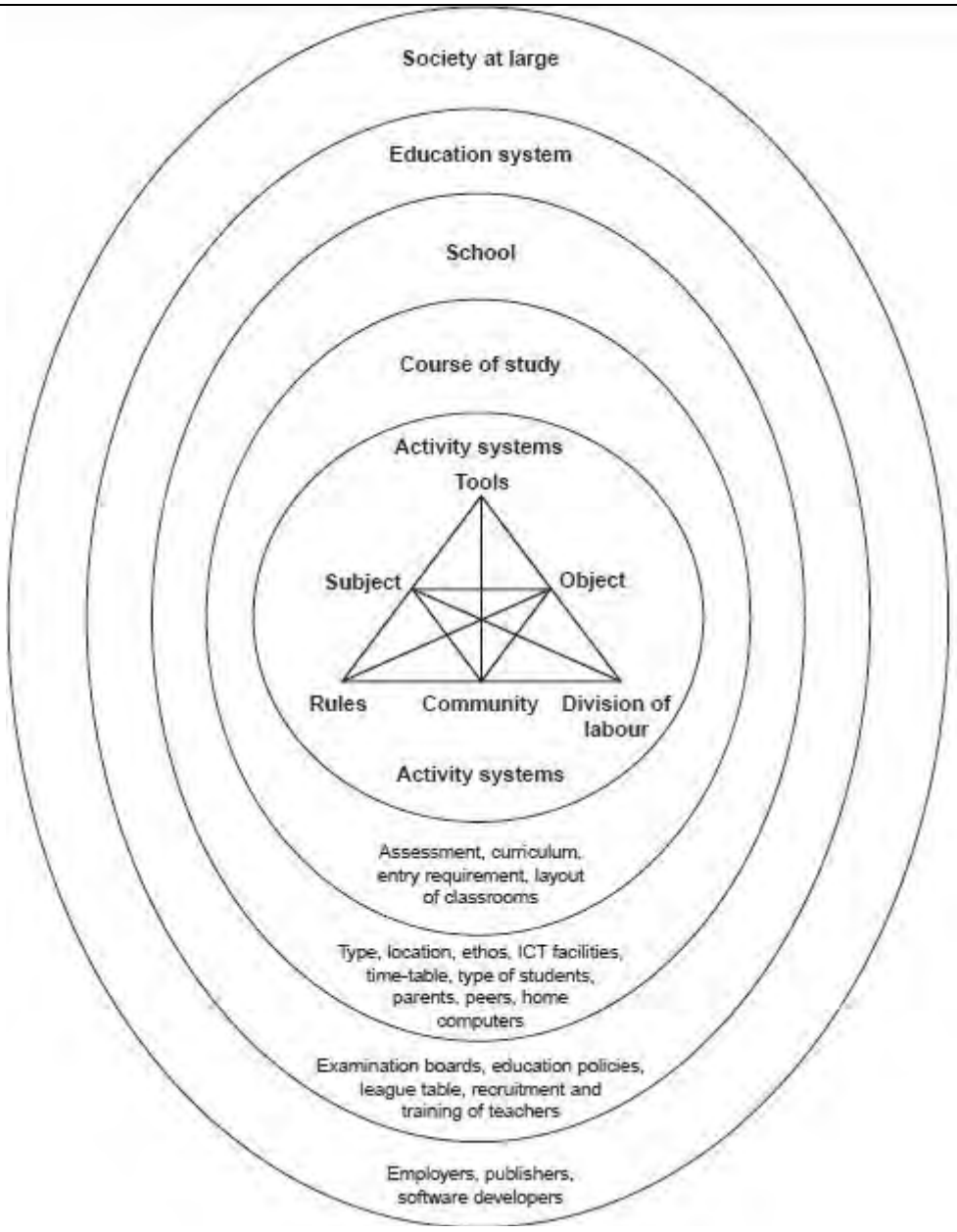

Figure 2.4: Applying the garden metaphor to the activities systems (Lim, 2002:417)

The researcher motivates the use of AT as a theoretical framework because it generates a comprehensive research agenda to study the totality of ICT integration into Singaporean schools and thereby informing key stakeholders of the opportunities and limitations of ICT integration (Lim, 2002).

The similarities drawn from previous research to this research are evident. The choice of AT as a theoretical framework for this research is also drawn from the works of (Kuutti, 1996; Russell & Schneiderheinze, 2005; Hardman, 2005; Blin & Munro, 2008; Karasavvidis, 2008; Mlitwa & van Belle, 2010 ;) who have researched on the motivation to use AT as a

theoretical framework within the area of teaching and learning. Kuutti (1996) speaks of a gap that existed in the late 1980s between research results and practical design within the field of HCI. This research investigated a need to identify a framework that satisfactorily removes the disjointedness of theory and practice in HCI. The motive for using AT as a framework is due to the complex nature of system design and development, AT provides a multilevel approach at looking at a complex system. Russell & Schneiderheinze (2005); Hardman (2005); use AT to understand the factors influencing adoption of technology tools in the classroom. Blin & Munro (2008) use AT as a lens to understand resistance to change when introducing a disruptive technology into a teaching and learning environment. Karasavvidis (2008) proposes the use of AT as a theoretical framework for a study into blended learning. Blended learning according to Karasavvidis (2008) is the combination of traditional and online educational practices. Mlitwa & van Belle (2010) use AT as a perspective to interpret the actions and reactions towards LMS adoption within a learning environment. They compare various frameworks such as Structuration Theory and ANT but propose that AT is a better fit for their intended research outcomes. Blin & Munro (2008) investigate on the resistance to change with respect to pedagogical practice.

Conclusion

The main objective of this chapter was to establish an understanding that is necessary in order to capture all possible avenues that lead towards understanding the tensions and contradictions that may arise during the technology adoption process at a Higher Education Institution (HEI). This chapter has established understanding on the premise that defines learning in the point of view of the researcher and thereby presenting a lens through which this research will be investigated.

3. CHAPTER 3: LMS ADOPTION IN HIGHER EDUCATION

Introduction

This section brings further insight into the research context. It is essential that the reader not only understands the framework used in this research but also understand how other activity systems influence the LMS adoption process. It is necessary to understand the concepts of the digital divide and digital literacy especially within a historically disadvantaged context, because this will assist the reader in appreciating how social groupings of *digital immigrants* and *digital migrants* form their basis of argument when dealing with integrating disruptive technologies in education. LMS is an educational technology which is widely used in distance learning, it is important to understand this technology and establish how it contributes towards improving the learning and teaching landscape. WSU is not a pure distance learning institution but it attempts to blend certain distance learning techniques in order to overcome its context of being a multi-campus, geographically dispersed comprehensive HEI. This section describes the concepts of distance and blended learning.

Keyword(s): Higher Education in South Africa, Centre for Learning and Teaching Development; Education Technology and Innovation Unit; Blended Learning; Computer Mediated Communication; Learning Management Systems Adoption;

Higher Education in South Africa

Similar to Higher Education around the world, South Africa is no different as it faces the challenges of having limited resources available on aging infrastructure for a growing demand (Brown & Czerniewicz, 2010). This is a result of lifting the barriers that existed in the apartheid era which limited access to specific racial groups to quality education in South Africa (DoE, 2001). The agenda for transformational change in education to enable lifelong learning and create a state of readiness for the 21st century is being implemented (DoE, 2001). According to Brown & Czerniewicz (2010), Higher Education enrolments increased by 25% from 1995 up to 2007 and the diversity of intake also increased. In response to the increased enrolment, prevailing indications show that HEIs are or have invested substantially in Information and Communication Technology (ICT) infrastructure through their own means or assisted by grant-giving organizations (Brown & Czerniewicz, 2010). In attempts to meet the government's agenda of increasing foreign direct investment and human capacity building, the Department of Higher Education and Training (DHET) has made strides through the policies outlined in the "*White Paper for Post-School Education and Training*" to increase the number of post-school institutions (DHET, 2013). DHET has restructured the Higher Education sector by incorporating all post-school institutions, the new configuration of DHET "*enables tremendous possibilities for cooperation and mutual support among post-school institutions for the benefit of the system as a whole, and for its students and other stakeholders*" (DHET, 2013).

The integration of ICT in education is one of the key strategic plans for Higher Education transformation in South Africa, there is a move to introduce more blended and distance learning within post-school institutions in order to bridge the gap between resource-limited institutions and the high demand for post-school education (DHET, 2013).

Digital Divide and Digital Literacies

Higher Education in post-apartheid South Africa has changed in the diversity of its student body (Jaffer, Ng'ambi & Czerniewicz, 2007; CHE, 2010). This diversity requires that educators need to find innovative ways of motivating students who have been shaped using different historical cultural artefacts to achieve deeper learning through innovations such as the utilization of ICT. ICT mediated learning can take place as long as the learning process is designed to accommodate the subject (student and educator) and the activities are appropriate

to elicit some form of motive that drives a student to learn. Due to the growing influence of ICTs in our day to day lives, the government of South Africa is pushing policies that enable the integration of ICT into teaching and learning (Jaffer, Ng'ambi & Czerniewicz, 2007). There is space for emerging technologies in education due to the affordances that ICT presents to academia, but ICT and policies alone cannot improve teaching and learning because education is relatively resistant to change and mature research has not yet been conducted on numerous emerging technologies (Veletsianos, 2010).

The presence of digital exclusion is linked to socio-economic factors which at times may be seen as a barrier to fully tap into all the benefits that ICT may bring to education. This view point brings to light the question of the level of digital literacy and aptitude required to make learning through ICT a positive experience (Helsper, 2011). Early research has proven that over a period of time, digital exclusion does not play as much a role as previously perceived on the impact of the motive to engage with ICT. It was discovered that the absence of skills played a major role in ICT engagement for learning purposes (Helsper, 2011). Helsper (2011), notes that more recent research has shown that the true digital divide exists based on the perception of relevance by an individual. Therefore it is not enough to only provide ICT infrastructure and ICT skills but there is a need to improve on social inclusions in order to develop more realistic digital inclusion policies. Bozalek & Ng'ambi (2013) speak of the need for policies which promote leadership based advocacy roles within the social and structural spheres where ICT integration is needed in order to help improve the rate of uptake of emerging educational technologies.

Extensive research conducted by Brown & Czerniewicz (2005) within a South African context sheds light on the state and motive for ICT use by students and lecturers. Their research focus was primarily on students but the social diversity of the research participants can provide a linkage to the perceptions held by lecturers on ICT adoption endeavours. This linkage is a reflection of the social diversity and historical cultural artefacts that lecturers in this research context bring to the classroom, which impacts on their perceptions on ICT adoption.

ICT Adoption in Historically Disadvantaged HEIs

The global trend of developing 21st century learners who are ready for the information age cannot be ignored no matter whether you are in the first or developing world. The drive to

grow an Information Society stems from global commitments for change, political awareness of ensuring a well-equipped human resource exists to maintain economic growth, and institutions of learning that need to develop a skilled workforce for a modern society (Mlitwa, 2007b). The relevancy and agenda for ICT adoption in Higher Education is evident, but how successful, beneficial and effective is the ICT integration and eventual use? How do institutions that exist in a historically disadvantaged context successfully and effectively adopt ICT in their teaching and learning practice? How equipped are the stakeholders to ensure change occurs within a diverse teaching and learning society?

Through partnerships with NettelAfrica, Makarere University in Uganda implemented e-learning in an attempt to overcome the national drive to improve literacy levels of Ugandans (Kituyi & Kyeyune, 2012). Their first implementation used Blackboard, their second attempt at successful implementation was done using Knowledge Environment for Web-based Learning (KEWL) and their third attempt was done using Moodle. The transition from one platform to another was due to focus and recommendations from donors. NettelAfrica focused on post-graduate students using the Knowledge Environment for Web-based Learning (KEWL). Moodle was introduced in an attempt to broaden the reach to include undergraduate students. The success rate of these attempts is significantly low due to various factors such as resistance to change; student's lack of e-learning knowledge; lack of support from top level management and leadership to champion the implementation process; and lack of resources; these and various others seem to resonate with other Ugandan institutions (Kituyi & Kyeyune, 2012). Interestingly the usage of LMS was higher in post-graduate than undergraduate students, further to this staff who used LMS were motivated by its documented advantages whereas students mostly used it out of curiosity (Kituyi & Kyeyune, 2012).

Marsden, Ssekakubo & Suleman (2011) state that high ICT illiteracy rates among the student community; low comfort levels with technology; usability issues of LMS; poor marketing strategies; ineffective maintenance strategies and insufficient user/technical support are some of the main factors that lead to partially successful and/or failed ICT integration. The research conducted by Marsden, Ssekakubo & Suleman (2011) was across five African universities, they sought to identify why many LMS-supported e-learning initiatives in developing countries do not fulfil their potential. The common thread that seems to link the researched institutions is that they failed to choose the right platform, did not incentivize key

stakeholders, provided limited support and/or assumed success based on developed world outcomes (Marsden, Ssekakubo & Suleman, 2011).

Phahlane & Kekwaletswe (2012) state that learners in Higher Education are not fixed to particular locations yet access to learning resources tend to be fixed to a stipulated time and location. They propose the implementation of a ubiquitous learning environment that supports a mobile learning and end-user devices (Phahlane & Kekwaletswe, 2012). Phahlane & Kekwaletswe (2012) describe education in South Africa as being predominantly instructional and lacking personal interaction in educator-to-learner and learner-to-learner knowledge transfer. Phahlane & Kekwaletswe (2012) also raise concerns with respect to academic unpreparedness, English language as a medium of instruction for learners and educators whose first or second language is not English and large class sizes which inevitably remove the possibility of personal interaction. Their research tackles the issue of relevancy and how to make LMS more accessible not only in terms of technological access but also content. Student responses at University of South Africa (UNISA) and Tshwane University of Technology (TUT) made it clear that LMS content must speak directly to them in terms of language, presentation and access (Phahlane & Kekwaletswe, 2012).

The Kilimanjaro Christian Medical University College (KCMU) in Tanzania faced the challenges of a year-on-year growth in first year student enrolment, they considered adopting an ICT intervention strategy which resulted in the implementation of the Learning Curriculum Management System+ (LCMS+) (Killewo, et al., 2014). LCMS+ is a proprietary LMS developed by Duke University School of Medicine, which is a key KCMU partner. The critical functionality they required was for material sharing, student monitoring and on-line assessment. The success factors for this ICT intervention were placed on good planning, selecting an appropriate mediating tool, having well equipped personnel and adequate infrastructure and support structures (Killewo, et al., 2014).

The failures and success factors outlined in this section can help identify some of the salient points which apply to ICT adoption and at often times lead to not always achieving a 100% successful teaching and learning integration. In understanding where stakeholders of ICT adoption get things right or wrong, it remains relevant to appreciate the motives for lecturers to decide whether they will use or not use LMS in their teaching. A perfectly suitable ICT

intervention in teaching and learning may result in becoming a poor strategic choice because users (lecturers and/or students) fail to acknowledge or place value on the ICT intervention.

ICT Adoption at WSU

HEIs especially for those operating in historically disadvantaged areas face great challenges characterised by the need to provide 21st Century learning experiences for a growing student body. As a way to overcome some of the challenges faced by WSU, the CLTD was commissioned through institutional policy to integrate ICT in teaching and learning. CLTD defines its mission as follows,

> *"To promote excellence in learning and teaching by providing integrated and specialized professional expertise and services for all faculties towards the improvement of the institutional learning and teaching culture."* (WSU, 2006).

CLTD is the department responsible for the strategic roll out and uptake of LMS use in teaching and learning on all campuses and delivery sites. The implementation of LMS integration is assigned to the ETIU which is a division in CLTD. The objectives of the ETIU is to champion e-learning as both a teaching and a learning management system; promote academic expertise in the integration of learning and teaching; coordinate curriculum innovation in digital learning; manage the institution's Learning and Teaching Technology Centres and provide advice on learning materials development, both printed and online (WSU, 2009).

Each campus has an ETIU e-learning specialist(s), learning materials developer(s) and an administrator. The ETIU services one or multiple delivery sites depending on their geographic location and proximity. ETIU members are responsible for training staff and students on how to use the LMS and to offer LMS support (WSU, 2011).

First year students have varying degrees of exposure to ICT both inside and outside of the classroom. It is not the role of ETIU to bridge the digital divide but rather to influence ICT adoption regardless of the level of ICT exposure. In their research, Brown & Czerniewicz (2014) acknowledge that students from disadvantaged backgrounds enter university with limited digital literacy levels, especially computer literacy. Historical disadvantages have made a direct impact on the digital literacy levels among lecturers. Academic staff members

both first timers and seasoned practitioners tend to use traditional teaching methodologies. In order to transform their pedagogy there is a need to equip academic staff with computer skills, technical and procedural know how of ICT integration and knowledge on e-learning (WSU, 2009). CLTD, through designated units provide support on ICT literacy, Information literacy and Integration literacy in order for staff to redesign existing curriculum and transform their pedagogy in order to capacitate a learner for the 21st century workplace (WSU, 2009).

Distance Learning, Blended Learning and Learning Management Systems

Distance learning is an approach to teaching and learning that is a working model which aims to ease the strain of internal and external forces within an educational system (Anderson & Dron, 2010; Moore, et al., 2011). Through the digital revolution, distance learning has transformed into a much more involved learning process through the development of e-learning or LMS and other Computer Mediated Communication (CMC) tools.

Blended learning is an approach by which teaching and learning happens both in the traditional classroom environment as well as on-line (Horn & Staker, 2012). Blended learning attempts to benefit from teaching and learning that occurs face-to-face and on-line, this therefore affords students a greater learning potential. DHET intends on stimulating lifelong learning by encouraging HEIs to expand distance learning through on-line and blended learning (DHET, 2013). This strategy intends on employing open learning principals and encourages the development of well-researched and high quality Open Educational Resources (OER) (DHET, 2013). Blended learning uses ICT-mediated learning techniques which enable students and educators to utilize shared resources, communicate and collaborate within suitably designed teaching and learning activities. The use of ICT in education has resonated well with HEIs worldwide, this is evident in the growth of the Higher Education e-learning industry globally (Wagner et al., 2008; Mlitwa, 2007b).

LMS, Course Management Systems (CMS), and/or Learning Course Management Systems (LCMS) can be described as a computer hardware and software environment for network-enabled learning programs and processes (Carliner, 2005). The differences between CMS and LMS is the audience and functionality that each was originally designed for. CMS was targeted for long term education within an academic setting whereas LMS was targeted for short term workplace training (Carliner, 2005). In a study conducted by Mlitwa (2007a), the

ability for LMS and CMS to facilitate learning without physical classroom boundaries provided a solution that would complement the efforts of distance and residential learning. E-learning makes use of many technologies. These technologies may either be specifically developed or adapted for the e-learning process. CMCs, LMSs and CMSs are technologies which have found a space in education and share similar features. Table 3.1 illustrates the dimensions of e-learning. An educator will utilize various attributes of e-learning in order to provide an improved learning environment for diverse learners. It is therefore appropriate for LMSs to be designed to support these dimensions.

Dimension	**Attribute**	**Meaning**	**Example**
Synchronicity	Asynchronous	content delivery occurs at a different time than receipt by the student	lecture module delivered via email
	Synchronous	content delivery occurs at the same time as receipt by the student	lecture delivery via web cast
Location	Same place	students use an application at the same physical location as other students and/or the instructor	using a GSS to solve a problem in a classroom
	Distributed	Students use an application at various physical locations, separate from other students and the instructor	using a GSS to solve a problem from distributed locations
Independence	Individual	students work independently from one another to complete learning tasks	students complete e-learning modules autonomously
	Collaborative	students work collaboratively with one another to complete learning tasks	students participate in discussion forums to share ideas
Mode	Electronically only	all content is delivered via technology, there is no face-to-face component	an electronically enabled distance learning course
	Blended	e-learning is used to supplement traditional classroom learning	in class lectures are enhanced with hands-on computer exercises

Table 3.1: The Dimensions of E-Learning (Wagner, et al., 2008:27)

LMS provides a platform that has the potential to foster student-teacher and student-student interactions. This implies that not only can a student be mediated by the teacher but also by a more capable peer. This shows that the interpsychological and intrapsychological stages of learning can be reached and effectively brought about through appropriate use of LMS. At an

interpsychological level, learners benefit from LMS by having more freedom to interact with the teacher and peers.

In as much as there is evidence that LMS can in fact be a learning enabler there are considerations that need to be made. Kizito (2002) identifies the following contradictions that exist when adopting computer-mediated collaborative learning in open and distance education in Africa:

- Macro-contextual issues: *The lack of access to technology due to unavailability, inadequate network speed and/or high cost* leads to a contradiction between the objective/motive of activity systems of academic institutions and government. Government want ICT use but academic institutions do not meet minimal standards required to successfully implement full ICT strategies in education.
- Institutional issues: *The adoption of CMC practices necessitates transformation of the current institutional and organisational structures. Most institutional organizational structures are still designed to support traditional modes of teaching and learning. The institutions would have to make sure that the necessary access and infrastructure requirements are in place. Provide training and support necessary to manage CMC platforms. Build and redesign course material, websites and conference areas which facilitate learner engagement.* Majority of the contradictions that are identified occur between the rules-subject-tool and tool-object-division of labour. Institutional and organizational structures need to be revised which calls for changes to rules and division of labour elements in order to resolve the contradictions.
- Pedagogical issues: *CMC requires pedagogical re-engineering. Incorporating CMC activities into traditional distance education courses involves the addition of opportunities for communication and discussions previously not included in the courses. Students and teachers will take up different roles. The teacher requires moderating skills in order to nurture and support positive group dynamics. The student must be aware that there is a greater percentage of self-directed learning. There is likelihood for exclusion of group participants as they may fail to fit in due to lack of language skills, limited oral communication, and cultural background. The assessment process of grading group work is a challenge.* The contradictions identified here are mostly inner contradictions between subjects (student and educator especially). These contradictions focus around the *rules-subject* and *rules-community-*

division of labour. Traditional pedagogies do not entirely suit the CMC collaborative practice. A change in mind set of subjects, community and division of labour is required in order to best-fit and produce desired and predictable outcomes that are in tune with computer-mediated collaborative learning practices.

The adoption of ICT in education is increasing, LMS and CMC tools rank high within adoption strategies for centres of Higher Education in South Africa (Mlitwa, 2007b). Worldwide, learning institutions are turning to innovation in order to maintain quality but also retain a form of relevance to a growing information age (Mlitwa, 2007b). The perceived benefits of LMS in teaching and learning such as the potential to widen access, reduce cost, and to improve the quality of education has prompted Sub-Saharan African countries to adopt LMS (Mtebe & Raisamo, 2014). The efforts of HEIs in South Africa to meet demands and pressures due to increased student enrolments, diversity of students and limited resources contribute towards the motive for ICT adoption. How well does this ICT adoption strategy create a seamless inclusion with respect to the historical cultural artefacts that students and lecturers bring to the classroom environment? Wagner et al. (2008) draw on the fact that it is important to establish who is responsible for e-leaning success within Higher Education. This research investigates the LMS adoption influences which characterize the motive for use or lack thereof by lecturers.

LMS Adoption in South African HEIs

The diffusion of e-learning into HEIs can be a challenge, especially within a space which has constrained infrastructural and human resources. HEIs need to become more innovative with their strategies of managing societal and institutional pressures (Bozalek & Ng'ambi, 2013).

Diffusion involves a kind of social change, which is defined by a process(s) by which alteration/change occurs in the structure and function of a social system. The rate at which this change occurs may be uncertain due to the factors of the newness of the innovation. This then implies that innovations cannot diffuse themselves no matter how fantastic they are perceived to be and need a conduit and motive for information exchange which leads to progressive diffusion (Rogers, 1983).

The LMS adoption patterns in South African institutions of Higher Education vary based on organizational need, presence of an opportunity or a mandate (Mlitwa, 2007b). The first

adoption of a LMS at Stellenbosch University was imposed on academics by top management. This adoption pattern resulted in widespread use but limited feature engagement and therefore reduced the possible learning potential that ICT could bring (Mlitwa, 2007b). A top-down approach does not always result in successful LMS adoption as was researched by Brown & Czerniewicz (2009) who compared HEIs and discovered that a balanced approach is necessary.

The research of Dagada & Mungai (2013), refute the notion that LMS have a *one size fits all* characteristic. The University of the Witwatersrand was compelled to review its choice of Blackboard as the institutional LMS because the mediating tool was found to be a wrong fit for the HEI (Dagada & Mungai, 2013). The process of selecting a replacement was rigorous and required internal buy-in from all relevant institutional stakeholders such as members of faculty and university management, as well as the need for external expert opinions. This research emphasises implementation and not specifically user adoption but it does bring to light that it is essential to choose the right LMS tool which has buy-in from all key stakeholders.

The University of KwaZulu-Natal (UKZN) was formed through the merger of the University of Natal, Durban (UND) with the University of Durban-Westville (UDW) in 2004 (Jaros, et al., 2013). The department of Civil Engineering faces the challenges of increased enrolments together with the limited number of teaching staff (Jaros, et al., 2013). In order to improve the qualification offering at UKZN, the department modified their Bachelors offering to include a civil engineering design project module. This project requires students to produce detailed evidence of compliance with eight targeted Engineering Council of South Africa (ECSA) outcomes. The department opted to use an open source LMS, Moodle, because of the functionality it provides, namely, discussion forums, file sharing, and anonymous peer evaluation (Jaros, et al., 2013). The LMS intervention has proved to be a contributor to the departments successful full programme accreditation since 2008.

The widespread adoption and relevance of LMS in Higher Education cannot be ignored and the drivers for its integration in teaching and learning environments are increasing. It is important that all stakeholders within the LMS adoption process have the right motive which results in successful integration. The various adoption patterns need to take into consideration

the intrinsic factors that influence stakeholders to use the LMS. This research attempts to identify the factors contributing towards LMS use or lack of use within the research context.

Conclusion

The main objective of this chapter was to establish an understanding on the current state of Higher Education in South Africa and how this influences the drive for change through the use of ICT in education. There are some factors/barriers that are immediately identified when it comes to ICT adoption within historically disadvantaged areas and among individuals with historically disadvantaged backgrounds. Digital inclusion is usually a major contributory factor and based on this research it has been found that ICT access and infrastructure is not the only major factor that impacts the rate and level of motivation to adopt a technology. This chapter investigated common approaches used in technology innovation adoption in order to understand the adoption process and appreciate the need for appropriate integration frameworks in order to achieve a higher degree of adoption success. The chapter that follows documents the research strategy that was used to understand the tensions and contradictions that may have potentially arisen during the technology adoption process at the HEI being studied.

4. CHAPTER 4: RESEARCH DESIGN

Introduction

This section details the research context and research approach. The purpose of this research is to identify the enabling and hindering factors which trigger a lecturer to either adopt and use a LMS within a teaching and learning environment or reject the use of an LMS in their teaching and learning practice. The context of this research provides a diversity which is found within centres of Higher Education throughout South Africa in a post-apartheid era. Staff and students bring to the classroom diverse cultural historical artefacts which may influence the LMS integration process. The digital divide may also play a role in motivating the use of LMS from a lecturer and learner perspective. Frustrations arising from limited infrastructural and support mechanisms may contribute towards the success rate of LMS integration and eventual use in an educational setting. This research hopes to provide some parameters that may need to be considered when adopting an LMS in a diverse community of users, the primary focus of this research is solely on lecturers.

The framework used in this research is AT which describes the interactions that occur in an activity systems in order for a collective objective to be achieved. The variables that will be measured are derived from the elements in an activity system, which are rules, subject, object, tool, division of labour and community. AT is used to analyse LMS adoption in a historically disadvantaged, multi-campus, comprehensive Higher Education Institution (HEI).

Keyword(s): Qualitative Approach; Mixed Method Approach; Interpretive Research; Narrative Method; Activity Theory;

Research Approach

The methodological approach for this research study is interpretive. Interpretive research is a qualitative research approach which attempts to understand the nature of the way in which a phenomena exists and operates within a given context from the participant's perspective (Elliott & Timulak, 2005). Qualitative research is applicable to this study because the motivation of this research is to establish key enabling and hindering factors that contribute towards LMS adoption in teaching and learning at a tertiary rural-based institution. LMS is by no means a new educational technology but the low and sometimes slow rate of adoption success especially in developing countries (Marsden, Ssekakubo & Suleman, 2011) motivates the need for further inquiry into this phenomenon. It is therefore important to understand the context and research how LMS plays a role within it, therefore a qualitative approach of study is most suitable. Quantitative research offers numerical-based reasoning whereas qualitative research offers linguistic-based reasoning for the existence of a phenomenon (Maxwell, 2008). Sayre (2001) provides the main differences between qualitative and quantitative research, Table 4.1 summarizes the differences.

Criterion	**Quantitative Research**	**Qualitative Research**
Assumptions about the context	Evaluator control and ability to manipulate the setting, which improves the internal validity, the statistical conclusions validity, and the construct validity of the research designs	A naturalistic approach: does not explicitly manipulate the setting
Purpose of the research	Understanding how social reality, as observed by the evaluator, corroborates or disconfirms hypotheses and evaluation questions	understanding the subjective lived experiences of program stakeholders (discovering their truths)

Approaches to conducting research	Form hypotheses that can be applied in multiple situations (deductive approach)	Move from particular to more general statements (inductive approach)
Role of the researcher	Strive for objectivity and impartiality; Measuring instruments that are constructed with a view to making them reliable and valid	Personal involvement and partiality; The evaluator as the primary measuring instrument

Table 4.1: Differences between qualitative and quantitative approaches (Adapted from McDavid & Hawthorn, 2005:175)

Methodology

A view through an AT lens, can unwrap new and previously documented contradictions. A contradiction in AT symbolizes the presence of a tension(s) between elements of an activity system, and these tensions may evolve into "*tangible"* factors for the use and/or lack of use of LMS in teaching and learning.

The research approach involves conducting a survey which serves as real data for the research. Through interpretation, it can be established whether lecturers experience similar thought patterns and processes as those encountered in the literature review section when adopting an educational technology like LMS is investigated. To collect a more insightful perspective which cannot fully be captured in a questionnaire, this research makes use of a lecturer's story which reflects their experience of the LMS integration process. This one-on-one interview provides a narrative which illustrates the true pre- and post- ICT adoption experience. The procedure of implementing a narrative research consists of focusing on one or two individuals and chronologically ordering their story which reflects their experience of an event/phenomenon (Creswell, 2006). A semi-structured interview approach with open ended questions is most suitable for this research, where the individual is open to explore and reflect on their experiences. In order to gather insightful information the questions were open-ended, focused closed-ended questions gathered specific information about the participants

such as their personal information. Appendix A and Appendix B contain a sample of research questions which were used to extract data that will be analysed in this study.

Participants

The intention of this case study is to understand the perceptions held by lecturers towards use of ICT in teaching and learning. This research solely focuses on IT Department lecturers at WSU and uses a non-probability theoretical sample group of lecturers who use and do not use the LMS for teaching and learning. The IT Department operates from three campuses and has a total of 25 lecturers including the researcher. The choice of drawing a sample group solely from the IT Department is based on purposeful sampling (Maxwell, 2008). Purposeful sampling is chosen because of the following considerations, the researcher is a member of the IT Department and therefore has a firm understanding of the context and has an established relationship with the sample group; and the IT Department formed part of the pilot adoption phase of the LMS roll-out at WSU.

The survey sample group comprised of those who use and do not use the LMS; those who have prior LMS experience (either by attending the institutional workshop or from historical experience); those who have more than five years work experience and those who have less than five years work experience in the tertiary education sector. A total of 24 questionnaires were distributed and 11 useable responses were received. The constraints to having a 44% response rate was attributable to pressures from work, some lecturers had a higher workload due to the resignation of staff and/or staff were standing in for those on sick/study/maternity leave. This purposeful sample provides a baseline which leads towards a more conclusive research process. Further to this it provides a position to not only validate the research but also provide in-depth understanding of the needs, interests, and incentives of the participants which can be broadly applied to the population (Patton, 1990).

Ethics and Validity

The following details considerations that the researcher undertakes in order to ensure an ethical approach is constantly performed throughout the research process. The nature of this research may result in participants revealing sensitive information which they wish not to be directly attributed to. To overcome this concern, all data collected and analysed is kept confidential by using pseudonyms to represent interviewed participants. Therefore the true

identities of the participants will not be discovered. Interviews will be conducted within a safe space in order for participants to feel comfortable and be able to freely express themselves. A copy of the consent form used in this research is part of Appendix A and Appendix B.

In order for a student of the University of Cape Town to undertake research they must obtain ethical clearance for their research.

Ethical clearance was sought and approved for this research. Research participants for the survey and interview signed consent for their data to be used in this research.

This research uses an interpretive approach which makes it imperative that the data collection and analysis process is transparent and acceptable to all stakeholders. The main concerns about the conclusion of a qualitative study surround the matters of bias and reactivity (Maxwell, 2008). This is why it is imperative that questions are not guided or influenced by the bias of the researcher; responses to interviews are appropriately captured and summarized; methods of analysis of data follow an approved framework. Approach to ensure validity:

- The existing relationship that the primary researcher has with the sample group will demonstrate a firm understanding of the context that the research is based on;
- The position that the researcher holds on the ideals and understanding of the intended research will be clearly explained so as to maintain transparency;
- Transcribed interviews will be validated by respondents to ensure that what was collected and analysed reflects the true sentiment and ideals of the respondents;

According to Maxwell (2008), the use of triangulation ensures that although data has been collected from a diverse range of individuals and settings it reduces the risk of bias. In this research the interview is used for completeness rather than triangulation. The interview participant was also part of the survey and provided deeper insight into the survey responses.

Data Collection

The responses to the survey produced data which was meaningful and will be discussed in the next chapter. In order to capture the full scope of a lecturer's experience, one lecturer volunteered to participate in a follow-up face-to-face interview. Feedback from the survey

guided the refinement of the schedule for the in-depth individual interview. The interview is a platform from which information can be extracted from research participants, the responses provided by participants are to be truthful and honest interpretations of the research phenomenon (Maxwell, 2008).

This research uses AT as the lens through which this research phenomenon is investigated. The research questions and emphasis are guided by the elements of an Activity System. Table 4.2 highlights some of the areas of focus that the interview questions are based on.

Element / Interaction	**Research Question**	**Purpose**
Subject	• What cultural historical artefacts do IT lecturers bring into the classroom? • What experiences do IT lecturers have when dealing with LMS adoption and integration? • Frequency and motive of LMS use or lack of use? • What is the purpose of the activity/actions for the user?	• Establish technology competency, integration know-how, understand knowledge gap between LMS Stakeholders • Establish ICT-literacy rates • Establish the comfort levels of using educational technologies especially LMS
Object	• What are the perceived objects/outcomes of use? • How are these outcomes achieved?	• Ascertain activities where the LMS is used to achieve learning outcomes
Tool	• Can the mediation be characterized as tool, medium, or system?	• Establish motives for LMS use or lack of use based on perception on whether an LMS is a mediating tool

	• In what way is the LMS used to foster learning and bring a feeling of equality among students from different delivery sites? • Which are the activities in which LMS is used (why is a certain activity taking place)?	
Rules	• What are the ethical guidelines followed in LMS use? • What national and/or institutional policies have been established to support LMS adoption and use? • What institutional policies or guidelines promote or hinder LMS use?	• Establish the LMS selection and usability issues • Establish the expectations and marketing strategies of LMS adoption and use
Community	• What is the degree of knowledge of and assistance from stakeholders?	• Establish the effectiveness of user support strategies and structures
Division of Labour	• What are the roles and responsibilities of the institution, students, support staff, lecturers? • What social/stakeholder structures need to be explored/engaged by lecturers in order for the lecturer to get the best out of LMS in teaching?	• Is there a defined and well known structure with respect to LMS use, support and management

Table 4.2: Research Questions

The primary data collection instruments for this research are:

Questionnaire – The survey follows a mixed method approach to collect qualitative and quantitative data through closed and open ended questions. A mixed method approach provides a position to analyse statistical data and stories relating to the participant experiences of a phenomenon (Creswell & Plano Clark, 2008). The survey had 11 usable responses from 24 potential participants. The survey served as an indicator for establishing what artefacts lecturers come with, how the phenomenon has influenced their pedagogy and whether the ETIU roll-out plan is effective.

In-depth interview and conversation – As a follow up to the survey. Brown & Czerniewicz (2014) make use of one active interview participant in order to preserve the richness of his narrative. In this research an individual IT lecturer was interviewed to get deeper insight into her perceptions and understanding of LMS adoption and her experiences before, during and after the pilot LMS integration strategy. The importance of using this qualitative research instrument is to experience the LMS adoption process through the story of a lecturer (Brown & Czerniewicz, 2014). Interviews can be used in a complimentary way when conducting qualitative research (McDavid & Hawthorn, 2005). The interview strategy used a semi-structured approach where closed and open ended questions were used. Appendix B is a sample of the interview guide which was followed for the individual interview.

The interview was recorded digitally and transcribed by an accredited organization. To preserve validity, it was important for the participant to accept the content of the transcribed interview before data analysis commenced. Classification of data is categorized and aligned with the six elements of the mediational structure of an activity system.

Data Analysis

The outcome of analysis in this qualitative research is to interpret the data collected through questionnaires and an interview. This research collected data against research documents through a review process. Data analysis and data collection activities run at the same time where possible so that if there was a need for follow up sessions, new or updated data collection instruments could be built in order to yield meaningful results (Coffey & Atkinson,

cited in Maxwell 2008). Maxwell (2008) lists the main groups of qualitative analysis namely: categorizing strategies, connecting strategies and memos/displays.

The intention is to categorize collected data based on the six elements of the mediational structure of an activity system. Utilizing the inter-element interactions and relationships, underlying patterns, perceptions and use/lack of use of LMS can be identified. Coding of the collected data fits into identified tensions and/or contradictions that arise from within and between elements of activity systems. Utilizing the existence of relationships between AT elements helps identify contradictions which in-turn form part of the connecting strategy. The memos and displays serve as an introspection and acts as a guide which aligns the collected data, analysed data with the research questions.

In order to efficiently process and analyse data Maxwell (2008) recommends using software tools that can help code and retrieve raw data, this is highly beneficial when large volumes of data have been collected. This research makes use of Microsoft Excel to help capture, code and categorize data. Figure 4.1 illustrates the path a researcher might follow when exploring a theme, this process was applied in this research.

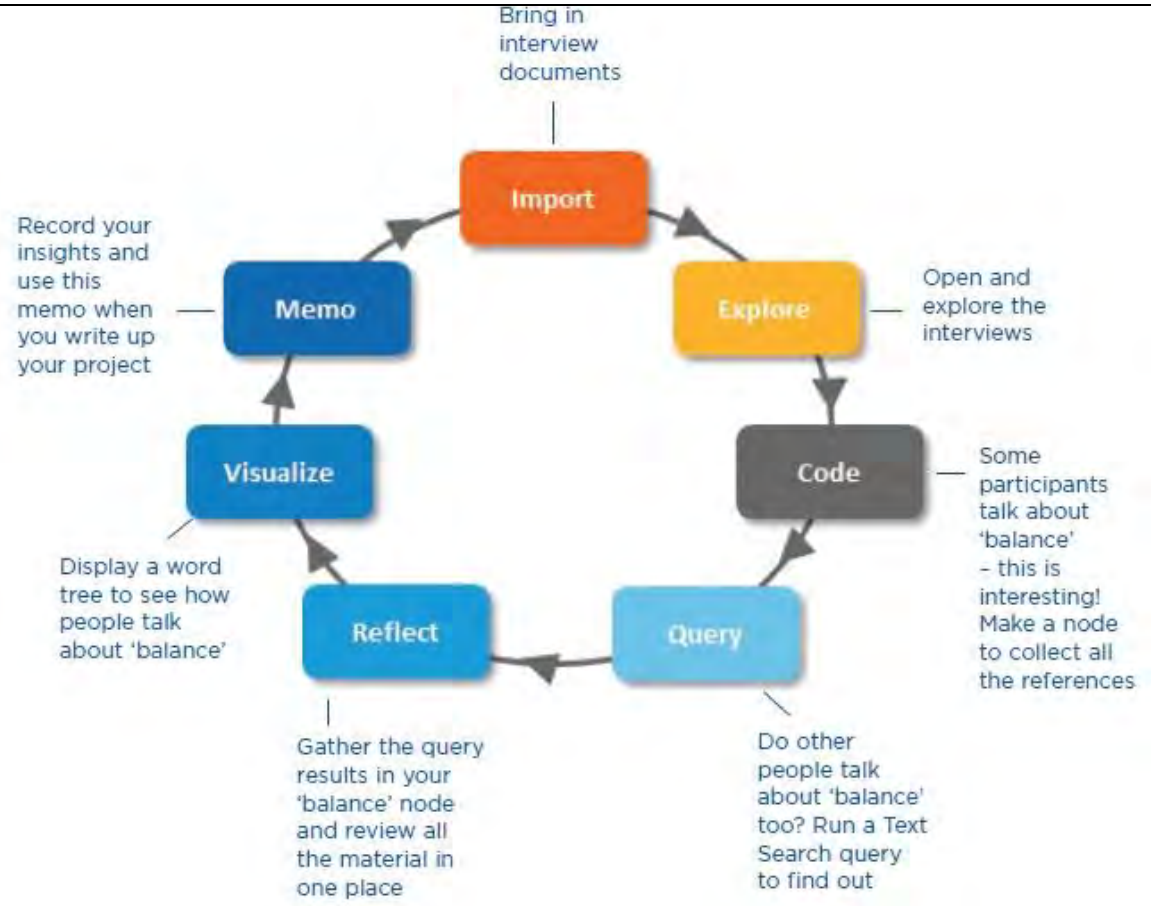

Figure 4.1: Example of a path you might take when exploring a particular theme (QSR, 2013:6)

This research primarily focuses on data collected through surveys and an in-depth individual interview. The analysis will formulate findings based on these sources of information. Using the AT framework, data gathered is categorized and analysed to establish existing contradictions/tensions between elements of the activity system. Key phrases that capture the perception of participants is used to populate the research framework.

Conclusion

The focus of this chapter was to design a structured approach to collect and analyse relevant data which will form a core part of the discussion with respect to responding to primary and secondary research questions. It is the intention of the researcher to follow research guidelines discussed in Chapter 4 and to apply the Activity Theory as the research framework in critically collecting and analysing data. The next section will detail the experience of data collection and the process of data analysis.

5. CHAPTER 5: FINDINGS

Introduction

This section details the analysis of the collected data and presents a discussion of the findings from data collected through questionnaires and an interview (see Appendices A and B). The results are divided into sections guided by AT elements of subject, tool, object, rules, community, and division of labour as discussed in Chapter 2. These sections are deliberately used in order to easily establish any contradictions and tensions which may explain the phenomenon this research is studying.

The subject section describes the demographic of participants and discusses the participant's artefacts which contribute towards teaching, and their perception of LMS. The tool section explores the participant's understanding of LMS and the LMS functions/features in use. The object section discusses the expected outcomes of LMS use and how the outcomes are attained. The rules section discusses the structural influence which plays a pivotal role in active LMS by participants. The community section identifies and discusses the role and influence of stakeholders within this activity system. The division of labour looks into roles that make a distinct and direct impact on LMS use.

Data from Survey Questions

Subject

The biographic and background information of the respondents creates a back-drop which begins to characterize the participants who are active in the context which this research focuses on. This section presents the respondents gender, age, and experience. The research received 11 responses, each respondent is identified by *R#* (where # represents the respondent's unique identifier). The active participants did in fact represent a near true demographic spread which characterizes the IT department. 8 respondents were male and 3 respondents were female. Table 5.1 illustrates the distribution.

		Number of Respondents	**Percentage**
Valid	**Male**	8	73%
	Female	3	27%
	Active Total	11	100%
Missing		13	
Overall Total		24	

Table 5.1: Respondents by gender

The IT department has 17 (68%) males and 8 (32%) females who service three campuses situated geographically far apart. The gender respondent distribution was not deliberate but it certainly reflects the true nature of the department. Table 5.2 illustrates the age distribution.

Age	**Number of Staff**	**Percentage**
29 – 32	3	28%
33 – 36	4	36%
37 – 40	1	9%
41 – 50	1	9%
Over 50	2	18%
Total	11	100%

Table 5.2: Respondents by age

The IT department is made up of junior lecturers, lecturers, and senior lecturers. These positions are based primarily on experience and qualification. The lecturing experience levels that are reflected by the participant responses show a smooth distribution. Their experience of

lecturing within the research context does provide an impression that they have a fairly good understanding of their working environment. Table 5.3 illustrates their lecturing experience and length of employment at WSU.

Years	Lecturing Experience (including elsewhere)	Percentage	WSU Employee	Percentage
3 – 6	3	27%	5	46%
6 – 10	3	27%	3	27%
10+	5	46%	3	27%
Total	11	100%	11	100%

Table 5.3: Respondent lecturing experience & WSU employment

The data relating to the lecturing experience and years of employment at WSU should provide further understanding of the influences that drive respondent perceptions towards LMS use in teaching. A consolidated view of this data can be viewed in Table 5.4.

Respondent	Gender	Age Group	Lecturing Experience	WSU Employee
R1	Male	29-32	4	4
R2	Female	37-40	12	12
R3	Female	>50	16	13
R4	Male	33-36	6	4
R5	Male	29-32	13	8
R6	Male	33-36	10	10
R7	Male	>50	20	6
R8	Male	29-32	5	5
R9	Female	33-36	7	7
R10	Male	41-50	17	16
R11	Male	33-36	8	6

Table 5.4: Respondent profile

Table 5.5 reflects the responses from the participants on the open ended question "*In your own words what is an LMS*".

Response Type	Detailed Response
Delivery System	**R5**: "*An electronic delivery system for course content and assessment. There are also other features to help students with commonly asked questions*" **R9**: *"LMS involves lot of processes that are associated with learning and also enabling the delivery of learning content"* **R10**: *"LMS is a software application that assist in administering / documenting / delivering e-learning"*
On-line / E-tool	**R1**: "*LMS is an online application for the teaching, training, e-learning or e-tutoring*" **R2**: *"LMS is a tool used to enhance teaching and learning inside and outside a classroom"* **R3**: *"Software that can be used to do any/all of the following: provide online course content and links to content; provide learner discussion/blog facilities; provide online assessment and evaluations; be used to record learner results"* **R6**: *"A management tool (software) for administration of e-learning"* **R11**: "*It is an e-learning platform used in education to support face to face contact time*"
Teaching tool	**R4**: *"Integrating technology into teaching in a classroom"* **R7**: *"It is a system which uses ICT tools to enhance teaching and learning techniques"* **R8**: "*It's a system that is used to help and facilitate the teaching and learning process for both lecturer and students*"

Table 5.5: Respondents understanding of LMS

Most respondents view LMS as tools which supports teaching and learning, it is interesting to see that the responses show how participants view the functional attributes which can be used in teaching and learning. Three respondents view LMS as content delivery and management systems, this could identify one of the core uses of LMS by respondents. Five respondents

view LMS as an on-line or an e-tool for use inside and outside of the classroom environment, this could identify a trigger or motive to use LMS in teaching. Three respondents view LMS as system for enhancing teaching and learning.

For the purpose of this research there is a need for lecturers to not only know about the LMS tool but also have experience in using it either in teaching or participating in an on-line course. Hence, the selection of my sample was purposive. Table 5.6 illustrates the LMS experience artefacts that participants brought with them when they joined the institution.

	LMS training before WSU Employment	**Respondents**	**Percentage**
Very high	0		0%
High	4	R4, R5, R8, R10	37%
Low	2	R1, R11	18%
Very low	3	R2, R6, R9	27%
None	2	R3, R7	18%
Total	11		100%

Table 5.6: Respondents LMS training before joining WSU

The data in Table 5.6 reveals that there is a trend with respect to LMS experience prior to joining the institution. Two respondents older than 50 years had not received LMS training prior to being employed at WSU whereas 5 respondents between the ages of 29-40 had received low to very low levels of LMS training prior to joining WSU and 4 respondents between the ages of 29-50 received a very high level of LMS training prior to joining WSU. This data does show a possible influences over how prior formal LMS exposure can impact on current LMS perceptions at WSU.

The CLTD through the ETIU is in charge of rolling out the Blackboard LMS university-wide. The roll-out strategy includes LMS training for academic staff. Table 5.7 illustrates the level of training participants have received from the ETIU since the roll-out of the LMS integration project commenced.

	Number of Staff	Respondents	Percentage
Advanced	1	R10	9%
Intermediate	2	R7, R11	18%
Basic	7	R1, R2, R3, R5, R6, R8, R9	64%
None	1	R4	9%
Total	11		100

Table 5.7: Respondents who have received LMS training from ETIU

Table 5.7 reflects the efforts made by institutional structures to build capacity in LMS knowledge and use. The ETIU training team comprising e-learning specialists (Instructional Designers), learning material developers and an e-learning administrator work with staff to not only understand the Blackboard LMS but also learn how to integrate it into teaching and learning (WSU, 2009). The data does reflect that 7 participants have undergone basic LMS training which comprises of basic principles of building an e-learning course and navigating around Blackboard. Two participants received intermediary training which comprises of integrating Blackboard functionality such as tracking at-risk students, conducting and managing assessments, managing plagiarism through SafeAssign. One participant has taken the advanced LMS training which comprises of designing, building and maintaining integrated tasks/activities. Participant *R4* has not taken any LMS training workshops conducted by the ETIU, this may be attributed to the high level of LMS training received prior to joining WSU.

It is interesting to note that the one participant *R10* who has taken advanced LMS training also had a high level of LMS experience prior to joining WSU and has been with the IT department for 16 years and is in the 40-50 age group. Whereas participant *R4* who is in the 33-36 age group, has taken advanced LMS training prior to joining WSU but has not attended any LMS training sessions at WSU. This reveals the influence that cultural-historical artefacts have on how lecturers choose to engage with the LMS adoption process. The 7 participants who have undergone basic training have been with the IT department for between 4-13 years. The 2 participants who have been with the department for 6 years have undergone the intermediate LMS training. The 1 participant who has never undergone LMS

training, did not bring any formal LMS experience when joining WSU and is above the age of 50. The other participant who is above 50 years has taken the basic LMS training.

Table 5.8 provides some insight into the feelings of participants on open ended research question "*Do you think academic staff are prepared/ready for LMS integration? (Give reasons for your answer)*". This question elicits a personal perception on what characterizes readiness of academic staff for LMS integration.

	Number of Staff	**Responses**
Yes	4	**R6**: "*Given the minimal amount of computer literacy required for LMS, I'd say all academic staff are ready for this*" **R8**: "*The staff are ready to use LMS but many things are letting the staff down, things like network speed or performance or response time as our blackboard is very slow in responding and that is consuming a lot of time that is meant for teaching and learning*" **R9**: "*Because LMS accommodates the diversity styles of learning and allows students to be more active in growing their own knowledge together with staff as well*" **R11**: "*IT lecturers are supposed to be somehow ready for using LMS because it is in their field*"
No	1	**R1**: "*I don't think staff are ready for it. Because it takes long time to prepare*"
I don't know	6	**R2**: "*I really do not know, if staff is ready for the integration because of the lack of upgrading the infrastructure i.e. (computers, working network in the labs)* " **R3**: "*More staff are prepared than previously - although many just use it as an "online filing system". Staff are frustrated because of poor facilities, e.g. labs, computers, bandwidth, e.t.c*"

		R4: "" [no feedback provided] **R5**: "*As IT lecturers, we welcome the use of technology for T&L. But I cannot say it is the same for other staff at the university* **R7**: "*Most academic staff still use the traditional way of teaching and learning*" **R10**: "*Given the slow adoption rate seen thus far in WSU, I am not too sure academics generally are ready. It could be that a mind-set change is what required*"

Table 5.8: Respondents view of academic staff readiness/preparedness for LMS integration

Table 5.8 does bring an interesting point of contradiction where by academic staff may have adequate teaching experience, have access to LMS integration training and/or had prior LMS experience but there may be underlying factors which do not create a state of readiness and/or preparedness for LMS integration. Six participants relate staff preparedness to the level of prevailing technical and infrastructural challenges; limited knowledge of more functional elements of the LMS apart from content sharing; high levels of digital illiteracy especially in non-IT departments; and a refusal to change pedagogical praxis. One participant is certain that there is no amount of preparedness of university lecturers to use the LMS because of the time constraints which would inhibit the designing and implementation of on-line courses. Four participants share the view that academic staff are ready to integrate LMS in their teaching because of the training received; LMS will not be a distractive teaching tool because of the limited level of digital literacy required to use it and thereby making it easy to adopt; IT staff are supposed to be ready because it is their field; and staff are ready but the infrastructure is not and therefore will hinder the integration process.

From these responses, it can be picked up that there is an association between readiness with respect to time, skill and infrastructure. It seems this link causes resistance to adoption if these are not catered for.

The perceptions held in Table 5.8 influenced the reflexions participants had when asked of the chances the roll-out rate will increase in the future. Table 5.9 reflects the sentiment held by participants about an increase in the number of academic staff integrating LMS use in their teaching praxis.

	Number of Staff	Percentage
Fully agree	1	9%
	1	9%
	6	55%
	1	9%
Do not agree at all	2	18%
Total	11	100%

Table 5.9: Respondents position on an increased LMS integration rate by academic staff

Table 5.8 reflects that 4 participants are certain of the readiness of staff for LMS integration whereas in Table 5.9 1 participant is certainly sure and 1 participant is somewhat sure that there will be an increase in the rate of LMS integration in future. This result may be attributed to the concerns of technical and infrastructural challenges the institution faces, this view is reflected in participant R8's response in Table 5.8 "*The staff are ready to use LMS but many things are letting the staff down, things like network speed or performance or response time as our blackboard is very slow in responding and that is consuming a lot of time that is meant for teaching and learning*".

Three participants are not in full agreement that there will be an increase in the LMS integration rate, this can possibly be attributed to the sentiments held in Table 5.8 where constraints of time availability and infrastructural challenges play a significant role in LMS integration.

The contradictions that have been picked up from the subject, which is an element in an Activity System (AS) are that even though the LMS is viewed to be an advantage in teaching there has been a noticeable slow adoption rate. This tension of seeing the advantage but not adopting it can be attributed to a resistance to change and a preference to not change pedagogy; a limited availability of time for lecturers to be able to design and implement curriculum that wholly integrate LMS in teaching; and an unreliable and strained technical infrastructure.

Tool

Blackboard is the tool for mediation in this research, it is a proprietary LMS and is known at WSU by the name *WiSeUp*. It is important to get information concerning the tool from participants to assist in the analysis process. Areas of consideration are the relevance of the LMS tool, common features used by participants, advantages and disadvantages of the LMS as it exists within this research context. Table 5.10 reflects the perceived role of LMS held by participants.

R1: "*LMS is a good tool to use for sharing study material, discussion forums and for managing training and educational records*"
R2: "*It is to be used as a complementary tool to enhance teaching in any classroom and also enhance/aid learning for learners*"
R3: "*It should be used to stimulate constructivism and learner-centred teaching in addition to providing resources, self-assessment tools, group communication*"
R4: "*Is to engage both lecturer and student in the learning process*"
R5: "*It should supplement T&L*"
R6: "*To enable learners to have better access to learning material and for teachers to better deliver and monitor the learning process*"
R7: "*To assist the traditional teaching and learning techniques*"
R8: "*Is to facilitate and making convinient the teaching and learning by making sure that students get material on time and they can be able to submit on time anywhere there's network connection*"
R9: "*The role of LMS is to make the assessment easier and manage the competence of the students*"
R10: "*The role is to augment / supplement face-to-face learning in a blended learning environment. It should not be seen as a complete replacement for f-to-f learning in a rural university*"
R11: "*Main role surely is to complement the face to face theoratical lessons*"

Table 5.10: Respondents perception of the role of LMS

The viewpoints reflected in Table 5.10 match their perceived understanding of LMS as per their responses reflected in Table 5.5. 7 participants are of the view that LMS are there to compliment traditional modes of face-to-face instruction whereas 4 participants are drawn to the functional aspects that LMS bring to the teaching environment.

Based on the participants' understanding of LMS and their views on the role of LMS it would be expected that there is a high level of LMS integration by lecturers. The research data has already established that this line of thought is contrary to what is happening within the research context. To gain more insight into what could be triggers for this contradiction Table 5.11 reflects participant responses to the question "*Please indicate the advantage(s) of using LMS in your classroom*".

Advantages of LMS use	
Response Type	**Detailed Response**
Distribution System	**R1**: "*Well enough I have not used it, I can say that it helps to lecture even if the tutor is not present. The tutor can deliver the class material through online-internet*" **R5**: "*Easier to distribute assignments and announcements*" **R6**: "*Easy distribution of class notes, easy tracking and monitoring of students progress* *Students are able to access lecture slides and assignments easily*" **R7**: "*Students are able to access lecture slides and assignments easily*" **R8**: "*It helps in the distribution of material hence reducing hardcopies, I can post/load exercices, notes and assignments and students retrieve those any time and the even submit via LMS*"
Blended Learning	**R2**: "*It will be very advantageous to have and use it because learning for students won't be only confined in classrooms but outside and it can be done at their own pace and at anywhere and anytime*" **R3**: "*As indicated previously it can stimulate constructivism and activity-based learning; provide access to many additional resources; allow self-assessment; central submission of assignments; some degree of "auto marking", e.t.c off-site access*" **R4**: "*It catches the attention of students*"

Functionality	**R9**: "*Allows learners in one school to communicate with learner that are in other schools. Enhancing educational outcomes and cultural integration*" **R10**: "*Facilitate collaboration (even after the class room); Tracking performance; Sharing material and lecture aids (including slides); Get students prepared for the class in advance through the posting of preparatory materials;*" **R11**: "*Supplement T&L; help students to blog and ask / post questions and get answers anytime; learn other type of learning styles like computer-based and collaborative learning*"

Disadvantages of LMS use	
Response Type	**Detailed Response**
ICT & Infrastructure	**R3**: "*Requires reasonable response time from servers/network and access to proper facilities (e.g. PCs, tablets, e.t.c)*" **R6**: "*Sometimes the network can let you down*" **R7**: "*Accessibility becomes a problem if the network is slow or down*" **R8**: "*There are no exact disadvantages in terms of teaching and learning but the response time in our network is a major problem. Also the student may take time to adapt or know how to use these LMS subject to further training which consume valuable time"* **R9**: "*Lack of familiar structure and routine may take getting used. Slow or unreliable Internet connection can be frustrating*"
Lecturer	**R1**: "*It needs more time to prepare and upload the contents and both parties must have internet connection always to use it*" **R2**: "*It can be very disruptive to the lecturer when they are presenting a lesson*" **R10**: "*They might stop face-to-face class rooms*"
Student	**R4**: "*Some students use the opportunity to use other applications like facebook therefore get distracted*" **R5**: "*The learning curve for new students*" **R11**: "*Students might use it for other means: social purposes; It relies on good network*"

Table 5.11: Respondents advantages and disadvantages of LMS use in their classroom

In as much as there are benefits to integrating LMS in a lecturer's pedagogy there are also drawbacks. Comparing the two from a lecturer perspective may provide insight into the influences of the current LMS adoption rate. One participant declares that they do not use the LMS but did provide some ideas on possible advantages and disadvantages. Four participants indicated that one advantage is the anywhere and anytime accessibility of the LMS tool. One participant alludes to the fact that LMS can effectively catch the attention of the student. Four participants promoted the distribution of material as a key advantage. Three participants indicated that LMS use allows for open communication amongst classmates as well as

student interaction on an inter-campus level. One participant highlighted the ability to track and monitor student performance.

The drawbacks which have been highlighted by the participants include the lack of adequate preparation time required to create and administer LMS activities. Three participants indicated that the LMS tool is a disruptive technology for the lecturer. Five participants state that the technical and infrastructural challenges hinder LMS efficiency and accessibility to the LMS. Two participants indicated that students can get distracted from learning due to having easy access to social networking sites like Facebook for non-academic purposes during class time.

These advantages and disadvantages offer some further insight into the influences of LMS use by lecturers within this research context. One motive to use LMS is that it is accessible anywhere and at any time, but one motive not to use LMS is that the existing technical and infrastructural challenges provide an environment where a limited number of students can access the LMS and even if they do so there is sometimes a slow response time from the LMS tool when it is used. The LMS can capture the attention of students but this attention can be negated by the distraction of having access to on-line social networking tools. A motive not to use LMS is that it is time consuming to build and manage an integrated LMS course. Another motive not to integrate LMS is that it forces a pedagogical shift which may be uncomfortable for lecturers and thereby becomes a disruptive technology for them. Table 5.12, gives further insight into the perceptions held by participants on the open ended question, "*Please indicate whether you think BlackBoard is an appropriate LMS tool for WSU. (Provide reason(s) for your answer and/or recommend another LMS tool(s))*".

	Number of Staff	**Responses**
Yes	6	**R1**: "*Yes, blackboard works fine and it good tool for LMS*" **R4**: "*Since WSU serves mostly rural student it will help expose students to technology*" **R8**: "*It is appropriate because it allows us to post material any time. It is also appropriate as it facilitates the teaching and learning process but there is still improvements needed in the form of non-functional*

		requirements like performance or response time" **R9**: "*Because it encourages the constructive approach to knowledge acquisition and support active learning blogs, student forums*" **R10**: "*It has got the tools to assist / support the blended learning I wanted to implement in my course. But cost of Blackboard needs to be considered. Thus the potential use of an open-source alternative such as moodle could be investigated*" **R11**: "*It has most LMS features (evaluations, score sheets, document download etc)"*
No	3	**R2**: "*The current network infrastructure hinders the use of Blackboard*" **R3**: "*I find Blackboard "cumbersome" and "old-fashioned" - not "intuitive". According to my understanding it is also very resource intensive and expensive (very!). I have used moodle (as a learner and as a course "creator") and found it much more user-friendly*" **R6**: "*It would be better if Blackboard had mobile apps as most students cannot access it outside the lab environment*"
I don't know	2	**R2**: "*I really don't know if Blackboard is a best-fit for WSU since the infrastructure doesn't support it*" **R7**: "*There are many LMS tools which may be appropriate for WSU than Blackboard. It is appropriate to try-out at least three LMS tools to determine one suitable for the institution*"

Table 5.12: Respondents view on the appropriateness of Blackboard

The responses in Table 5.12 are a result of a reflection on the educational tool and determines whether the selection of the tool was appropriate to the existing context. In Chapter 3, it was indicated that the University of Groningen is WSU's e-learning collaboration partner. The choice to use Blackboard was recommended by the University of Groningen who also use

Blackboard as their institutional LMS. The responses from respondents adds another aspect to the motive(s) for LMS adoption which in some responses are not directly related to teaching.

Six participants agree that the tool is appropriate for LMS integration at WSU, this affirmation is based on the available features that most LMS tools possess. From the affirmations there is a hint of doubt on the tool based on non-functional requirements which Blackboard does not meet, such as the huge cost not only in maintenance but also in negatively impacting on a strained ICT infrastructure. Three participants are in total disagreement with the choice of Blackboard. This is based on the old non-intuitive design of Blackboard and the expense of Blackboard compared to Moodle and the need for the tool to better incorporate mobile device users. Two participants are uncertain whether Blackboard is appropriate and this is based on the fact that BlackBoard is not well supported on the existing ICT infrastructure, there is a need to review the selection process that resulted in adopting Blackboard as the institutional LMS.

These responses highlight a contradiction whereby some of the research participants want to use LMS for teaching but others consider Blackboard to be an inhibitor due to its non-intuitive design, high cost, lack of mobile platform integration and strain on the current ICT infrastructure. It certainly demonstrates that there may be a need to revisit the choice of LMS tool which better accommodates the state of a university's infrastructure and user profile. Table 5.13 reflects the LMS features used by respondents in their teaching praxis.

	Number of Staff	**Percentage**
Share material	9	82%
Use gradebook	2	18%
Use discussion forum	4	36%
Use monitoring and tracking	2	18%
Conduct assessments and surveys	6	55%

Table 5.13: LMS features used by respondents

The usage of LMS is definitely evident from Table 5.13 but the features used does reflect the level of training received by the research participants as is evident in Tables 5.6 and 5.7. From the research data gathered on the Subject and Tool it can be ascertained that Blackboard has a 55% favourability ratio in terms of suitability to the research context. The

depth of LMS use is limited to material sharing and conducting assessments / surveys, this is directly attributed to the fact that 64% of research participants have received basic LMS training from ETIU and attribute the role and advantage of LMS to these features.

The level of confidence that a lecturer has when adapting pedagogy by integrating LMS into teaching may influence their motive. The motives that limits adoption are influenced by confidence in tool, readiness of lecturer, suitability of tool for the context, and availability of technical, non-technical and infrastructural support.

Object

The outcome of integrating an LMS in teaching is to enhance the teaching and learning experience for both the lecturer and the student. In order to reach this outcome there must be appropriate objectives in place in order to meet the fundamental outcome. This section looks into the objects, in particular the number of subjects currently integrated and the impact LMS adoption has on the teaching experience. The ETIU, which is part of CLTD is managing the LMS integration roll-out project. As discussed in Chapter 3, the objectives of ETIU is to champion e-learning as both a teaching and a learning management system; promote academic expertise in the integration of learning and teaching; coordinate curriculum innovation in digital learning; manage the institution's Learning and Teaching Technology Centres and provide advice on learning materials development, both printed and online (WSU, 2009). The IT Department formed part of the pilot project to integrate LMS in teaching and learning, over this period the participants provided some statistics of LMS use. Table 5.14 illustrates the number of subjects that have integrated LMS into the course design.

Number of Subjects	Number of Staff	Respondent
0	1	R1
1	5	R2, R4, R5, R7, R10
2	2	R3, R8
3	1	R11
4	2	R6, R9

Table 5.14: Number of subjects integrated by respondents

Table 5.14 reflects the active use of LMS in teaching by the research participants whereas Table 5.13 provides a simple view of the depth of feature use but this data does not reflect the

usage patterns, complexity of subjects, delivery site and whether the integration is current. Bearing in mind that the LMS training and integration project commenced in 2009 (WSU, 2009). Table 5.15 provides further insight into the impact that LMS has had on subjects, participants were asked the open ended question "*Explain the impact LMS integration has had on the courses you have used it in*".

Response Type	Detailed Response
Access to material	**R6**: "*Encouraged learners to have more continuous contact with the learning material*" **R8**: "*It was good impact as students could easily get material from the system and they easily submitted assignments and I was able to load additional material for further reading but the problem was always performance of Blackboard as it fails to load something*"
Course engagement	**R4**: "*Students have been more involving*" **R9**: "*LMS shown a positive impact to our courses and the students showed the acceptance of technology as well*" **R3**: "*Learners enjoyed the group activities and other opportunities provided. Rapid evaluations allow for modifications to teaching e.t.c (for the educator). Self-assessment guides learner studies*"
Performance	**R7**: "*There was an improvement in the pass rate*" **R10**: "*There was a great impact. My students were very actively engaged on discussion forums and used such forums to discuss and clarify subject contents. High-usage during exam preparation time must have impacted on their exam performance*" **R11**: "*Slight increase on passrate on programming courses; good communications with part-time classes*"
No impact	**R1**: "*I have not yet used*" **R2**: "*There's no impact because my students are not using the tool due to the lack of working computers and no network most of the time*"
No response	**R5**: "" [no feedback provided]

Table 5.15: Respondents evaluation on impact of LMS integration in their courses

The data in Table 5.15 is quite intriguing because of the mixed responses on the impact of LMS integration on the courses where the research participants have integrated it into their teaching. Eight participants reflected on positive improvements in learner engagement amongst cohorts; increased engagement with course material especially during assessment periods; increased student involvement; improved pass-rate; and a non-disruptive environment to learning because the technology was easily accepted by students. One participant indicated that there was no impact due to the fact that there were infrastructural and technical barriers in the form of a lack of adequate number of computers and a limited number of working network access points. One participant has not yet used the LMS in lectures and therefore could not provide any impact assessment.

Research participant R1, who has not yet used the LMS tool in teaching but has a positive perception towards the use of LMS in teaching and provided a positive review of Blackboard. The influences that have motivated R1 not to use the LMS can be strongly attributed to the lack of available time needed to design, implement and monitor LMS activities in a course, this stems from R1's response in Table 5.11 which relates to the disadvantages of LMS, "*It needs more time to prepare and upload the contents and both parties must have internet connection always to use it*".

The response from research participant R2 is also interesting because this response reveals that the lecturer was motivated to integrate LMS in a course but due to the non-availability of adequate computer lab equipment and unreliable connectivity to the network rendered the LMS activities useless because the students could not access them. This scenario could lead to frustration because a lecturer cannot plan the execution of LMS activities based on uncertainties in computer and network availability.

The research participants who successfully integrated LMS into their teaching did experience a positive impact. If these experiences are shared amongst lecturers they could influence the motive to further use LMS in teaching. There are gains to integrating LMS in teaching due to improved lecturer-student and student-student interactions; student access to material; and lecturers have the added ability to adapt pedagogy based on fast-feedback evaluations from students. From the responses it should be noted that there is lack of use due to technical and infrastructural challenges, the lecturers seem motivated to use the tool but are hesitant to do

so due to the existing challenges highlighted such as lack of adequate working computers, and slow network access.

Table 5.16 reflects the perception held by the research participants on the impact LMS integration might have on student performance.

	Number of Staff	**Percentage**
Fully Agree	1	9%
	8	73%
	1	9%
	1	9%
Do not agree at all	0	0%
Total	**11**	**100%**

Table 5.16: Respondents sentiment on whether LMS integration can improve student performance

Using the data in Table 5.15 where 8 participants experienced a positive impact from LMS integration in their courses. Two of the eight participants explicitly noted an improvement in performance and pass rate. The data in Table 5.16 does mirror the experiences detailed in Table 5.15. Nine participants are of the opinion that LMS integration can lead to an improved student performance. This optimistic view point is encouraging as it sets a tone with respect to further influencing the motive to integrate LMS in teaching.

Table 5.17 contains responses from research participants answering the open ended question "*What outcomes would you like LMS integration to produce in future*".

Response Type	**Detailed Response**
Functionality	**R1**: "*Making a provision for video face-to-face lecturing or interaction between the students and tutor would be good*" **R7**: "*To facilitate easy way of marking essay type of assignments and tests*"

Independent learning	**R2**: "*I would like my students to be able to learn on their own using the tool and also from each other instead of relying solely on the lecturer*" **R4**: "*It will create the ground for students to discover rather than be lecturing to*" **R9**: "*Student must be independent and also be able to manage themselves not relying on the lecturer. Problem solving and decision making. Planning for their courses*"
ICT & Infrastructure	**R10**: "*LMS can only be successful, if and only if students do get access to Internet. Their lab-access in after hours, Internet access in residences are vital. With these, I would like to see all academic staff using LMS to support T&L (a blended approach)*"
Performance	**R6**: "*Improved learner performance*" **R11**: "*Good passrate; students to collaborate more; constructive discussion forums*"
No response	**R3**: "" [no feedback provided] **R5**: "" [no feedback provided] **R8**: "*I cannot really answer this one as I have not use the current LMS to its full potential so I do not know the full functionality of the current LMS*"

Table 5.17: Respondent view on future outcome from LMS integration

The response brings to light some of the considerations that may make LMS integration more attractive to lecturers. One participant would like to increase student-lecturer, student-tutor and student-student interactions by possibly incorporating a video conferencing facility. This option would serve a great purpose but is quite bandwidth intensive. Four participants would like to increase more activities for students to work collaboratively with one another in order to construct knowledge. One participant would like to improve student performance, but does not allude to how this could be done. Perhaps the suggestions of increasing collaborative engagement could be a consideration. One participant would like to have more assignments and tests managed by the LMS tool, this would improve feedback rate and also provide an avenue through which students could be in a position to self-assess their progress. One participant considers infrastructural development and improved access to facilities as a key to

improve LMS effectiveness and LMS adoption. Students having access to computer labs after hours; students and staff having access on and off campus provides an enabling environment where the LMS is available for use beyond prevailing restrictions.

The Subject-Tool, Subject-Object, and Tool-Object Activity System interactions bring hints on the current contradictions and tensions. Participants are aware of and to some extent confident in integrating LMS into their pedagogy but there is a withdrawn attitude towards actively pursuing this due to existing technical and infrastructural challenges. Participants highlight the fact that LMS integration can bring about intended outcomes but due to the perception that Blackboard as an LMS tool is not the most appropriate in this context due factors such as cost (financial, technical and infrastructural) implications and ease-of-use seems to create a barrier for increased use.

Rules

This section looks into the rules that directly influence the research Activity System. There is a need to investigate whether there exists any formalized processes and procedures to facilitate the implementation of the LMS integration roll-out strategy. Table 5.18 contains responses from participants concerning the open ended question "*Is the motivation for LMS use a personal choice or an institutional mandate? (Give reasons for your answer)*".

	Number of Staff	**Motive**
Personal	2	**R3**: "*Based on experience*" **R6**: "*The university does not require (yet) staff to use it as most are still untrained on it*"
Institutional	4	**R1**: "*It is an institutional choice*" **R2**: "*I use the LMS (Blackboard) cause it is the mandate from my supervisor and that the subject that I teach was chosen to be used as a pilot for the system within the department*" **R7**: "*Academic staff not consulted in*

		choosing Blackboard as LMS tool for WSU" **R9**: "*Because technology changes both the ways in which we learn and the ways in which we conceive the learning process*"
Both but more personal	3	**R4**: "*To help me keep up with technology*" **R8**: "*It is institutional because CLTD department promotes or motivates its use and even provide training but personal because not everybody is using it*" **R10**: "*The institution try to promote, in my case, it was my personal choice. I needed an LMS to promote collaboration among learners*"
Both but more institutional	2	**R5**: "*With the current network infrastructure problems, it is almost impossible to effectively use Blackboard. We are instructed to use it as there is an institutional mandate*" **R11**: "*There is a drive from the institution and the faculty to deliver courses on LMS platform*"

Table 5.18: Respondents motive to use LMS

The responses to this question are intriguing because they vary and are drawn from a position of self-reflection on the influence(s) which motivate an individual to integrate LMS in teaching. Two participants have only one influence which motivates them to using the LMS and that is a personal motive. Participant R3 derives the motivation through experiencing a positive impact from previous LMS integration successes. Whereas participant R6 attributes their motive as personal due to the limited training received by staff. This is an interesting response because participant R6 positively responded to the question of staff readiness and

explained that "*Given the minimal amount of computer literacy required for LMS, I'd say all academic staff are ready for this*". This sentiment is further qualified by the fact that R6 emphasises the distribution of course material as a main advantage of LMS. Participant R3 derives motive from experience whereas participant R6 derives motive from the ease of use of the LMS.

Four participants are of the opinion that the influence to use LMS is only from institutional drivers. Participant R2 was compelled to use LMS because the course taught formed part of the ETIU pilot LMS integration roll-out project and therefore participant R2 was instructed by superiors to use LMS in teaching.

Table 5.18 is a very interesting research find as it does highlight differences on the source of motive to use LMS. In general there seems to be a 50-50 split as to the major source of motive to use the LMS. The choice to use Blackboard as the preferred LMS is institutional but the imperative to implement it falls into institutional influence by way of ETIU and/or the academic department or a personal intent to have an LMS integrated into teaching. Based on the responses, there definitely does not seem to be a centralised focus on approach to LMS roll-out as it would have been evident in the responses. In as much as participants were trained to use the LMS as documented in Tables 5.6, 5.7 and 5.8, this seems not to have compelled them to feel more driven by the institution to integrate LMS in their teaching. Personal motivation is derived from experience and exposure to the benefits of LMS integration whereas institutional motive is applied through training and guided by policies and implementation strategies. This data reflects the position discussed in Chapter 2 where Bozalek & Ng'ambi (2013) propose a need to assign advocay roles within departmental structures where ICT integration is taking place.

In order to appreciate whether participants are guided by a mandate if the motive is institutional, Table 5.19 shows the responses from participants to the open ended question "*What are the institutional and departmental guidelines on LMS integration? (Elaborate and recommend)*".

Response Type	Detailed Response
CLTD	**R8**: "*I am not sure if there any guidelines but I know CLTD department motivates and encourages the use of LMS. I recommend that the institution should have a policy around the use of LMS. If they already have the policy they should enforce its implementation making it compulsory to use LMS by staff*" **R10**: "*There is a e-learning adoption policy. It is not compulsory, though there is a target*" **R11**: "*Not aware of any at departmental level, but the institutional guidelines are developed by CLTD*"
Departmental	**R9**: "*There are no clear guidelines that department should use. We are told or forced to use LMS*"
Unaware	**R2**: "*I don't know them*" **R3**: "*Unknown*" **R4**: "No idea" **R6**: "*Not aware*"
No response	**R1**: "" [no feedback provided] **R5**: "" [no feedback provided] **R7**: "" [no feedback provided]

Table 5.19: Respondent awareness of institutional/departmental LMS integration policies

Table 5.19 clearly shows how there is a lack of awareness on policies and guidelines for LMS integration either at institutional or departmental level. From the responses 4 explicitly state they are unaware of these policies and a further 3 participants did not respond to this question. Three participants provide detail on the existence of an e-learning policy document formulated by CLTD but have not seen it. One participant provides detail on the direct mandate by departments to integrate LMS but with no guiding policy document. Participants are generally not aware of any policy document which guides, enforces or suggests the need to integrate LMS in teaching. There are some respondents who are aware of the institutional body that promotes LMS integration, but are still not aware which division or policies guide these intentions. This evident lack of knowledge of any institutional policies may contribute towards a lack of motive to use LMS in teaching because of direction.

Chapter 2 highlighted the dilemma most academic staff face with respect to high workload allocations, Table 5.20 represents the response to the open ended question "*I have adequate time to prepare LMS-based learning activities. (Elaborate and recommend)*".

	Number of Staff	**Response**
Yes	6	**R6**: "*Since all my work is already in digital format, uploading on wiseup has become very easy*" **R8**: "*But the implementation on the performance of the LMS that we are using is highly recommended as staff stop using LMS because of the poor performance*" **R10**: "*Well, if you decide to integrate LMS into teaching you got to find time*" **R3**: "" [No feedback provided] **R7**: "" [No feedback provided] **R9**: "" [No feedback provided]
No	3	**R1**: "*Well! I am too busy with my research work, normal classes and extra classes*" **R11**: "*Due to work load being high not much time is given into developing a good LMS activity*" **R4**: "" [No feedback]
I do not use LMS	2	**R2**: "*Nope, but most of the time I just upload notes and presentation slides. Recently I can't log into the system*" **R3**: "*Not currently but have done in past. Once the time has been invested to set-up the course it is not onerous to add components. Initial "time investment" is quite high*"

Table 5.20: Respondent assessment of time available to design and manage a course using LMS

Six participants affirm that they have available time to design and manage a course using LMS. Further to this only half provide reasons for their affirmative response. Respondent R6 bases the availability of time on the fact that most course material is in a digital format and therefore this limits the time required for LMS integration. Data captured in Tables 5.5, 5.7,

5.8, 5.10, 5.13 and 5.15 all show how participants emphasise the sharing of material as an important part of LMS integration. The response from participant R6 is directly influenced by material distribution which does not require much design and management time if all material is already digitized. It should be noted that participant R6 has only attended the basic LMS training and therefore it can be assumed that this is all the participant is capable of doing with the LMS at this time.

Participant R8, who affirms that time is available but is not in a position to fully implement the design due to the ICT and infrastructural challenges faced. Participant R10 affirms that time is available because of the fact that if a staff member is personally motivated to use the LMS then they will plan around its use in terms of design, implementation and management. Table 5.18 which identifies that participant R10 has a personal motivation to get collaborative work done via LMS with students. Participant R10 is the only respondent to have attended advanced LMS training.

Three participants disagree with the notion that there is available time to design and manage LMS activities for a course. One participant did not provide reasons for this response but participant R1 and R11 highlighted as factors, workload over allocation and conducting research. Workload over allocation has a strong influence providing a motive not to use LMS. Two participants responded that they do not use the LMS, participant R2 does not use it because of network challenges which render the LMS unavailable. Participant R3 does not provide details for not currently using the LMS but notes that through previous experience designing and implementing an LMS integrated course requires a large investment of time.

The aspect of the time required to design, implement and maintain an LMS integrated course is certainly a factor that has the great potential of providing a motive not to use LMS. This is especially evident in this context where staff are unaware of policy documents which might guide departmental heads on how to allocate this time in staff workloads. One participant raised a point that they are busy with research and therefore cannot use the LMS.

The responses demonstrate that respondents are aware of the time needed to properly integrate LMS in their teaching, it also shows that experience helps in reducing the amount of administration time especially if the subject has been integrated already. Table 5.20 highlights the fact that due to a lack of knowledge of any existing departmental and/or institutional policies pertaining to LMS integration, respondents are left to fend for

themselves if they are personally motivated to use LMS in their teaching. It is therefore important to establish the role that various support structures play in attempting to foster an environment that motivates lecturers to implement LMS in their teaching.

Community

The community effectively are the stakeholders who influence the dynamics of the Activity System. This research looks at internal and external community structures that are used in order to assist the LMS integration process. As discussed in Chapter 3, the ETIU is an internal stakeholder, they are responsible for the successful implementation of the LMS integration project. Table 5.7 and 5.21 reflect the training participants have received and the influence this training has had on them. Table 5.21 is the data collected from the closed question "*Was the training helpful in motivating and assisting you with LMS integration*".

	Number of Staff	**Respondent**	**Percentage**
Very helpful	3	R6, R8, R10	27%
Somewhat helpful	6	R2, R3, R5, R7, R9, R11	55%
Not helpful	1	R1	9%
Never trained	1	R4	9%
Total	**11**		**100%**

Table 5.21: Respondent view of whether LMS training received from ETIU was motivating

Table 5.21 shows that the impact of training received did serve as an influencing factor to use LMS but it should be noted that personal motivation needs to be present in order for effective LMS integration to take place together with guiding policy documentation which detail roles and responsibilities of key stakeholders. Table 5.22 contains the responses from participants on the closed question "*Would you like to get more education and support to be able to use a LMS to a full extent*".

	Number of Staff	Respondents	Percentage
Fully agree	4	R4, R7, R8, R11	37%
	2	R2, R5	18%
	2	R6, R9	18%
	0		0%
Do not agree at all	3	R1, R3, R10	27%
Total	**11**		**100%**

Table 5.22: Respondents who need further LMS integration training and support

The data represented in Table 5.22 reflects the level of training received by participants which is held in Table 5.7. The interesting result of this response is that although 64% of respondents only received basic LMS training from the ETIU, 37% fully agree to the need for more training. 1 participant received advanced LMS training but 3 participants do not require further training. Participant R10 does not require further LMS integration training because the participant has received advanced training whereas participants R1 and R3 have only received basic LMS training. There must be a motive behind why R1 and R3 do not require further LMS training and support. In Table 5.21 participant R1 indicated that the training received from ETIU thus far was not motivating at all whereas participant R3 indicated the training to have been somewhat motivating. To further support the position held by participant R1 and R3, in Table 5.20 participant R1 reflects that availability of time hinders any possibility to use LMS in teaching whereas R3 has not recently used the LMS but does not provide a reason why. This is evidence that time availability is indeed a factor influencing the motive not to use LMS for teaching.

Division of Labour

Some of the stakeholders who play an active role in the LMS integration process are the lecturers, academic departments, CLTD through ETIU, and ICT support. Table 5.22 alluded to the fact that there is a need for more LMS training and support in order to increase motive to use LMS in teaching.

Support is a critical element in this Activity System, Table 5.23 establishes whether participants are aware of where to get assistance if ever they encounter challenges with LMS integration. The open ended question participants were asked it "*When I have a problem with the LMS system I know who to contact. (Elaborate or comment)*".

	Number of Staff	Response
Yes	9	**R1**: "*There is an ICT officer and he is in charge if any problems arise*" **R2**: "*I normally contact CLTD*" **R4**: "" [No feedback provided] **R5**: "" [No feedback provided] **R6**: "*Staff from CLTD always at hand to assist*" **R7**: "*For any LMS system problems encountered, contact CLTD*" **R8**: "*Yes, because there's an e-learning specialist from CLTD who helps with all problems and provide training as well*" **R9**: "" [No feedback provided] **R11**: "*E-learning specialists are available and are known, they usually send us e-mails*"
No	0	
I do not know	2	**R3**: "*Lack of guidelines, especially if network is suspected. There is a department lab technician, site ICT technicians and CLTD technicians!"* **R10**: "*Well, I do know, but never needed to contact them*"

Table 5.23: Respondents aware of LMS support

Nine respondents are aware of existing LMS support structures and 2 respondents are not sure of any LMS support structures. Three support structures have been identified from the 9 respondents, namely, CLTD, ICT and e-learning specialists. As discussed in Chapter 3, each campus has an ETIU team, each has key personnel to be consulted whenever there is a need for specific LMS support (WSU, 2011).

Two participants indicated that they are not sure of any LMS support structures. Participant R3 places this lack of knowledge on the non-availability of guidelines but does identify two support structures, namely, CLTD and ICT who may possibly offer support. Participant R10 is actually aware of the support structures but has no need to contact them, perhaps this could be because participant R10 brought a high level of LMS experience when joining WSU as

per data in Table 5.4 and has received advanced LMS training from ETIU as per data in Table 5.7. Further to that, Table 5.6 shows that participant R10 has been with the institution for over 16 years.

The existence of the ETIU does present a good position to further strengthen motive of academic staff to integrate LMS in their teaching. All academic staff members at the institution have laptops and access to the Internet on campus and other telecommunication tools in their offices in order to communicate with ETIU support staff. The interesting observation from the data in Table 5.23 is that from all 11 participants only 2 participants explicitly mention a support group in ETIU and 5 participants mention CLTD and not ETIU. Generally, it can be noted that staff are not fully knowledgeable of the support structures or procedures which are detailed in the support procedure document.

The negative impact that infrastructural and technical challenges have on LMS adoption was highlighted in Table 5.10, this status diminishes not only the motive for staff to use LMS but also students. As stated in Chapter 3, not all delivery sites face the same degree of challenges but they do face these challenges. In order to elicit the participants' view of the current state of network infrastructural support the following open ended question was asked, "*Is the current network infrastructure up-to-date? (Elaborate and recommend)*", Table 5.24 provides their responses.

	Number of Staff	**Reason for response**
Yes	0	
No	7	**R1**: "*Infrastructure use is not up to date. Even the basic things are not there for the students to use*" **R2**: "*The lab that I use for the subject that uses LMS has no network infrastructure and less computers are working*" **R3**: "*SANREN is only available on some sites but also impeded by other factors e.g. viruses and/or antivirus software*" **R5**: "*Our labs are not completely connected to the network*" **R6**: "*Wi-fi access at residences would make access a*

		lot better" **R9**: ""[No feedback provided] **R11**: "*It is on and off*"
I do not know	3	**R4**: ""[No feedback provided] **R7**: "*It is very slow and sometimes it is down. A reliable network would be very ideal for LMS in teaching and learning*" **R8**: "*I am not sure but what I know is that the Blackboard response is very slow, so I'm not whether this is because of network infrastructure or LMS implementation and configuration*"
Un-answered	1	**R10**: "*Well, not too sure as we still get network down-times often*"

Table 5.24: Respondent view on network and computer network infrastructure status

This presents a glaring condition that does not motivate but rather frustrates the participants when they attempt to fully integrate LMS in teaching. Table 5.24 definitely highlights a need for greater improvement by ICT support staff and departmental lab technicians to ensure that the network and computer infrastructure supports end-user access to the LMS.

The Subject-Rules, Subject-Community, Rules-Community, Community-Tool, Community-Object and Division of Labour-Community Activity System element interactions provide further understanding of the reasons behind use and lack of use of the LMS in teaching. The most evident contradictions are the lack of readily available and presentable policies at departmental and institutional level which guides how academic staff should implement and why they should implement LMS in their teaching. The motive to use LMS is stifled by the lack of policies and guidelines; a slow network infrastructure; and a small number of working computers in labs. There seems to be a disjointed approach whereby structures within the Division of Labour do not equally promote the creation of a more opportune environment for LMS use by Subjects.

In order to get a real sense of the experiences faced by lecturers before, during and after LMS integration, a narrative approach was used. This approach conducted a face-to-face interview

with a willing participant. The lecturer's story provides a more humanistic contribution into the research of LMS adoption and how events encountered influence their perceptions.

Data from Interview: Sheila's Story

The responses detailed in this section will focus on some of the elements in the Activity System which are relevant to the participant's real experience with the LMS integration process. The consent form found in Appendix B, ensured that the participant's identity remains protected and thereby creating a safer space to speak freely without judgement. Participant R2 accepted the invitation to give her story and for purposes of this research she will take on the name *Sheila*. Sheila has been working in the IT department at WSU for over 12 years. Prior to joining WSU, Sheila received very low level LMS exposure and limited formal LMS training. Through the ETIU, Sheila has received basic LMS training and has integrated 1 course.

The interview conducted with Sheila used the questionnaire found in Appendix B. Although some of the words in responses were inaudible at times, this did not compromise the quality of data collected. The flow of conversation during the interview developed a life of its own and did not follow the sequence and structure of the designed data collection instrument. This was mainly because Sheila reflected through her own chronological order. The full transcript can be found in Appendix C.

Subject and Rules

In order to understand the perspective that Sheila has with respect to LMS, it was important to get her responses on what an LMS is and what blended learning is.

> LMS understanding: "*It's a system that actually helps us enhance teaching and learning for students, so both students and the lecturers, because of managing learning means that you don't have to manage it only in class*"
>
> Blended learning: "*When you utilise all other avenues that are out there that can actually assist learning and teaching or enhance it inside class and outside class.*"

Sheila's responses to both questions show that she has captured some of the concepts of LMS and blended learning as was discussed in Chapter 3. This research is more interested in

identifying the influences that motivate a lecturer to use or not use an LMS in teaching. One possible influence could be a lack of confidence to integrate LMS due to the level of lecturer preparedness. In Table 5.8, the data shows that 6 participants were unsure of whether staff are prepared/ready to integrate LMS in teaching. Sheila was one of those participants and hinted on infrastructural challenges being a barrier that may promote this lack of preparedness. During the interview, Sheila referred to events which inform her opinion on the status of ICT literacy and the existing resistance to change. This corroborates her response found in Table 5.8.

> "*I mean, there are lecturers… do you know that there are lecturers who are still writing their exam papers… and many times we have to type it for them, even though the department or whoever gave them laptops*"
>
> "*Ja, but they will write it down and actually take the (paper) and give it to exams. So I will not just say everybody.*"
>
> "*If I remember, in exams they used to say "IT is the only department that actually gives out… presents a typed question paper"…*"

This identifies a barrier which academic staff may face, having low levels of ICT literacy creates a technology-based barrier which impacts not only LMS integration training but also LMS adoption. All lecturers at WSU have laptops and in some cases have desktops in their offices. A simple evidence of resistance to change is identified in the situation described where lecturers choose not to use available ICT tools to create examination papers but rely on submitting handwritten papers to more capable peers to complete the task for them. This may imply that an underlying internal contradiction exists where a lecturer does not want to expose their level of ICT literacy even though they know the benefits which ICT can bring.

The findings from the survey alluded to the fact that staff have sources of motive to use LMS, which might be only personal, only institutional or a combination of both. Sheila received LMS integration training from ETIU and has prior experience of using an LMS as a student in a short course she attended before joining WSU. During the pilot phase of the LMS roll-out project conducted by the ETIU, several courses were selected from identified departments. One of the courses which were identified is now currently taught by Sheila, and this was her experience.

"*When it first rolled out, lecturers were tasked to submit classes that they think we should first be integrated into this, so the class that I taught, was not chosen. And sort of like I was forced to adopt LMS because I inherited courses during academic year due to staff resignation and class re-allocation*"

When Sheila was forced to adopt the LMS she had not yet received LMS training from the ETIU because the courses she taught were not part of the pilot phase of the roll-out project for LMS integration. Due to staff resignations and course re-allocations, Sheila was institutionally compelled to integrate LMS in teaching due to the fact that she had "*inherited*" a course which was under the pilot LMS adoption process. The tension of this experience is highlighted by the following statements.

"*... even though you are inheriting this new subject, you are not inheriting the skills that they were given. I had to do it myself, as an IT person, you know?*"

"*... How is it going to benefit my students and benefit me because I have to see the benefit of it and I have to sell those benefits to the students. So if I'm not convinced myself, and I mean I don't know how to use it, I'll not use it. I will stick to what I know.*"

The evidence of this tension highlighted by Sheila brings forward the concept of how policy guidelines, stakeholder buy-in and LMS training are important. In this case Sheila did not receive LMS integration training from ETIU and was not compelled to do so by the IT Department but was forced into using LMS because of the workload re-allocation. This experience may be a direct result of not having or a lack of not making available LMS integration policies at departmental and institutional level in order to support lecturers better during the adoption stage. Due to the fact that Sheila was institutionally driven, she started to use LMS for teaching. It must be noted that based on data in Table 5.14 she has only integrated 1 subject, this reflects her perception of LMS and therefore has influenced her motive to not integrate other subjects.

Division of Labour

The data collected from the survey identified that the challenges faced by lecturers when working with an unreliable ICT infrastructure is a key source of tension within the LMS

integration Activity System. Sheila's experience in this regard are captured in the following statements:

> "*Okay, if I adopt this, if I'm going to go to class and let's say I posted something for them on blackboard since I have network access. Then the next thing, I go to class and I say: Go to blackboard. There's no network. So that at the end of the day I say, ah, why don't I just print out these things for them anyway?*"

Sheila's sentiments show frustration at making an attempt to integrate LMS in her teaching by developing exercises which need the use of the LMS but during implementation in the classroom she is faced with an unreliable computer network. This experience defeats the efforts from all stakeholders involved in their attempt to successfully integrate LMS in teaching. To elaborate this tension further, Sheila goes on to speak of the role management plays in further compounding this tension.

> "*Well, right, you are told that you need to do this (LMS integration), but yet they are not supporting you… they need to make sure that the supports are there. Computers should be working… You've got management who keeps on telling you that they are… what's this… in roll-out, because it's new. We tell them that you need these resources for students. And then, of course, you roll those student benefits but to an increased number of students. Then you tell them that: Okay, but if you increase the numbers, we're going to be needing more resources. They promise to give you those things. But you then end up having a small computer lab, but yet students can't fit in that small computer lab*"

This certainly highlights a source of LMS integration tension among the Activity System elements of Subject-Rules-Division of Labour. The Subject is motivated to use LMS based on personal and/or institutional reasons but the lack of computers for students or inaccessibility of the network make the LMS integration process more challenging. The current situation of unpublicised policy and procedural documents and management demands on increasing student enrolments to meet institutional targets (Rules); combined with a constrained computer network maintained by ICT department and non-operational computers in computer laboratories maintained by laboratory technicians (Division of Labour); and low motivation from lecturers to integrate LMS in teaching (Subject); make a recipe for a slow success in the LMS roll-out project.

Community

Sheila highlights some barriers which limit the use of LMS in teaching. In order to understand the impact of these barriers it is essential to understand some improvement considerations which should be applied in order to tackle pertinent barriers which limit LMS use by lecturers.

> "*You should first have a buy-in. Show me how is this going to make my life, as a lecturer better, will there be a facility change?*"

This response clearly looks into the resolution of internal and external contradictions which exist in the Activity System for LMS integration (Russell, 2002). Internal and external contradictions were discussed in Chapter 2. On one hand the institution wants LMS integration and higher student enrolments, on the other hand lecturers see the benefits of LMS integration but want to see that there is adequate infrastructure in place to successfully run the LMS without lecturer frustrations. Sheila also brings in a link between the academic staff and students, such that students also need to buy into the LMS integration strategy.

> "*I think so. I think if all other stakeholders and all other resources are helping them (students and staff) and also forcing them. We need to force them (students), I think they won't have a choice but to get on board, because I think, for them not to use it is bad… we currently allow them not to use it actually, because we are not confident enough in saying that: Yes, you should use it, because its not working.*"

Sheila highlights that student buy-in is a direct consequence of lecturers actively using LMS in teaching. The tension here is that there is a lack of confidence in the LMS tool due to constrained functionality which contributes towards a limited use. Not only do academic staff need to be trained in using the LMS but they also need to be confident in it so that they are in a position to transfer this confidence to students. The reliability of Blackboard in the research context plays a strong role in influencing lecturer and student engagement.

> "*There are many small things that you might think, if done properly, would also motivate use:*
>
> - *If the network can be on, it needs to be up all the time*
> - *Computer labs, If they can be maintained in such a way that they're fully functional*

- *Allow student to use their own devices in class (laptops, tablets, smartphones)*
- *Improve support*
- *Improve computer lab access after class time*"

Sheila highlights some fundamental considerations that should be looked into in order to improve the motive for LMS use by lecturers. The considerations posed by Sheila speak directly to the contradictions and tensions highlighted in the analysis of the data collected in the survey. Sheila's use of the word "*small*" illustrates that in her mind, it is not a difficult milestone to achieve improved LMS adoption if things are done "*properly*".

Conclusion

The main objective of this chapter was to analyse the data collected from the survey and face-to-face interview. It is clear that the LMS integration strategy being implemented at WSU has some successes and failures which result in contradictions and tensions that characterize LMS use within the research context. Using the elements of the Activity System as a framework, the data analysis was able to establish key contradictions and tensions which influence the motive to integrate LMS in teaching. The findings established that there is a need to make policies and guidelines known to all stakeholders so that they are not only aware of them but more importantly the critical purpose behind LMS integration. The findings also established a need to improve access to the LMS which is cost effective and easily accessible. There is a need for improved support at academic department level, ETIU level, and ICT support level. The findings highlighted a need to look into alternatives in terms of the choice of LMS tool, as there was no stakeholder consultative process when the existing LMS tool was chosen. Transparency, creates an avenue of buy-in through associated ownership of the integration process. There were concerns that Blackboard is a high cost proprietary LMS (cost on bandwidth, computer intensive, and operational licencing), this cost currently does not overcome the existing benefits. Table 5.25 illustrates the motivators and de-motivators for LMS adoption in this context.

Activity Theory Elements	Motivators	De-motivators
Subject-Tool	ETIU training; Outside workplace experience/exposure;	ICT illiteracy; Pedagogy change; Non-attendance of intermediate and/or advanced ETIU training; Suitability of Blackboard as institutional LMS;
Subject-Object	Understanding LMS capabilities; Personal and institutional motivation;	Confidence in using LMS; Limited infrastructural investment in relation to existing demand;
Tool-Object	LMS functionality;	Cost of Blackboard; Integration for mobile at low data cost; Network unreliability; Low number of working computers in labs;
Rules-Subject	Guidelines provided in ETIU training on LMS use;	Limited awareness of policies and guidelines; Lack of incorporation of LMS use in workload allocation; Limited student access to open-labs;
Rules-Community-Division of Labour	Support from stakeholders (ETIU, ICT, CLTD, etc.);	Limited support size to maintain technical and non-technical based challenges; Limited awareness of existing support structures;

Table 5.25: Motivators and de-motivators for LMS use

The next section provides the conclusion and makes recommendations based on the findings which relate to the following for contributors that influence use or lack of use: ICT literacy; technical and non-technical infrastructure; resistance to change; tool appropriateness; and policies and guidelines.

6. CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

Introduction

This section summarises the research process, concludes the findings and presents the research judgement and recommendations. The research conducted is not new to the area of educational technology adoption but it does provide further insight into critical aspects to achieving success in technology integration in teaching and learning. The purpose of this research was to investigate the phenomenon of LMS adoption among Information Technology (IT) lecturers at a rural based developmental university in South Africa. The motive for an academic institution to adopt a blended learning approach through ICT interventions can be found in diverse universities across the world (Gonçalves & Pedro, 2012). The motives for academics to integrate ICT in their teaching can be directly attributed to:

> "… *perceptions of their attitudes, perceptions, previous beliefs and values considering technology-integration in today's teaching, as well as its identified advantages, level of complexity and required effort."* (Gonçalves & Pedro, 2012)

The research follows a theoretical framework which is grounded on AT. AT allows a researcher to investigate the relationships that exist in an educational system and in this case from a lecturer's perspective. The details of lecturer perspectives were drawn from two qualitative data collection instruments. A survey and a narrative approach. The narrative approach allowed the researcher to explore the real experiences of a lecturer, thereby making a position to illustrate where some tensions present themselves in the Activity System through the analysis of the lecturer's story.

Summary and Conclusion of Findings

Using AT as a lens through which to investigate the phenomenon has resulted in identifying some of the influences which help characterize perceptions held by IT lecturers. The answer to the research question is contained in the tensions and contradictions which exist between and within elements of the Activity System. As discussed in Chapter 2, the elements of an Activity System provide an appropriate framework to follow. Figure 6.1 summarizes the research findings from an angle of de-motivators for LMS adoption and Figure 6.2 summarizes the research findings from an angle of motivators for LMS adoption.

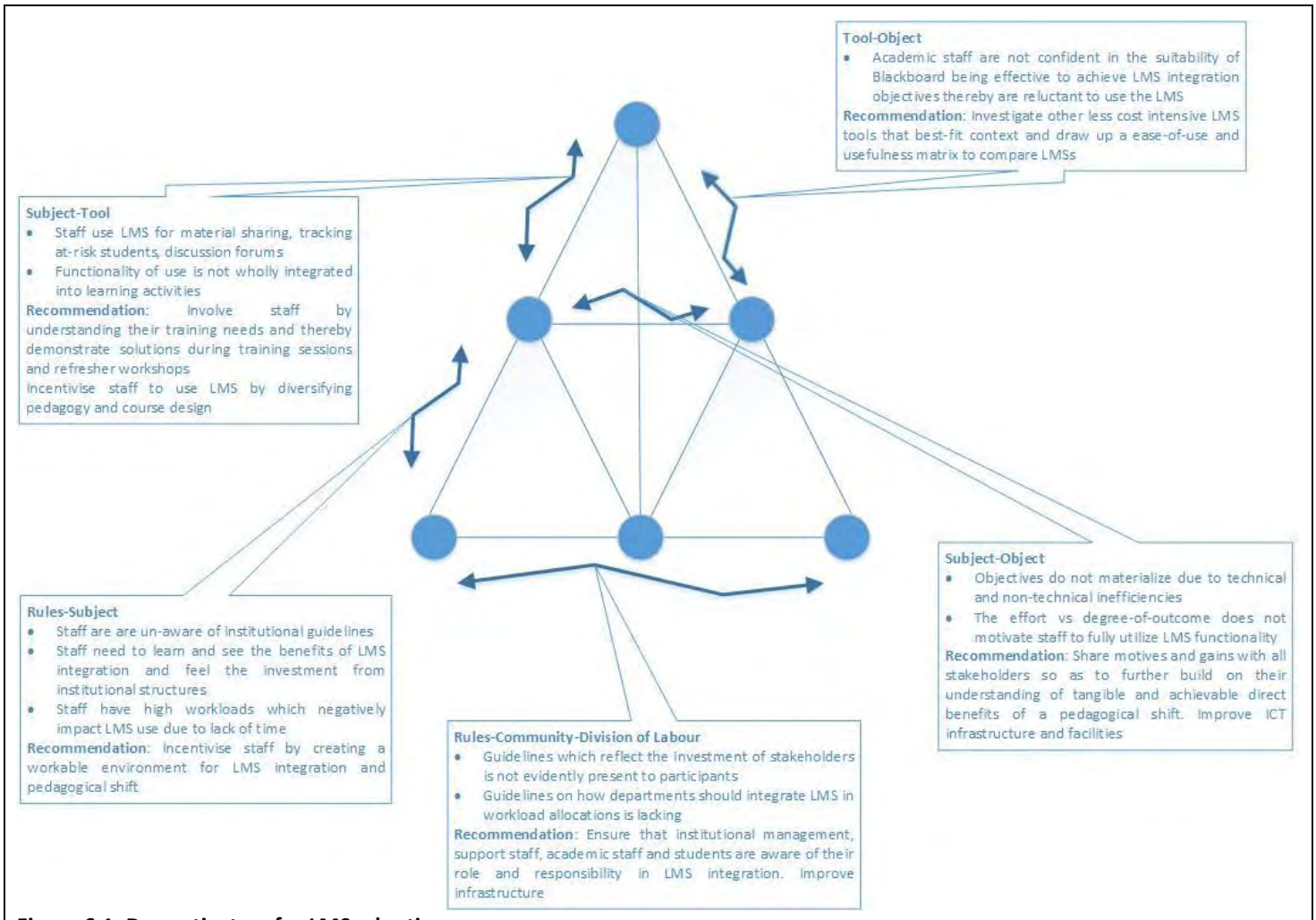

Figure 6.1: De-motivators for LMS adoption

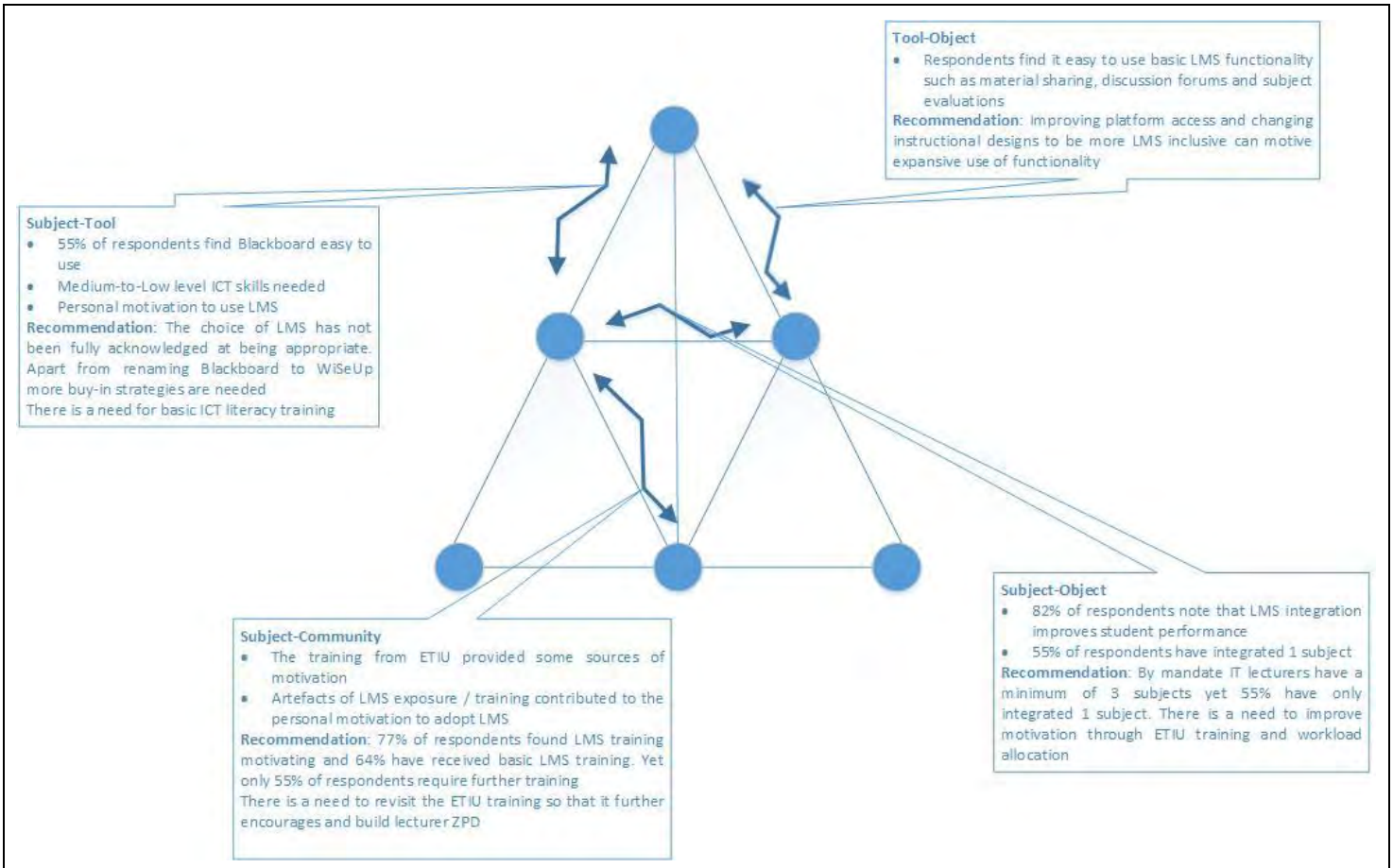

Figure 6.2: Motivators for LMS adoption

The objective of this research was to identify what influences the perceptions held by lecturers which lead them to be motived to either adopt or not adopt LMS in their teaching praxis. In Chapter 3, Kizito (2002) identifies three sources for contradiction which this research also finds and concurs with. Firstly, the *macro-contextual*, which in this case it is the levels of satisfaction with the existing ICT infrastructure and resources within the research context. The technical challenges faced by lecturers lead to increased frustrations. The tension that is identified with respect to non-working computers and slow network access leads to a reduction in confidence in the LMS and results in a lack of use, limited functional use and/or no use. The existing campus data network becomes congested due to high bandwidth intensive operational requirements (i.e. ITS, VoIP, Video Conferencing, Blackboard etc.) during peak usage times. This congestion slows response times for Blackboard and thereby makes it challenging for in-class use. It creates a tension because the lecturer is left to use traditional praxis of teaching because the intended mediation tool does not function as predicted. In class, the limited number of working computers contributes

further to this frustration as it takes time for students to find out which computers are working and students end up having to share a computer which diminishes the intended impact of use. Phahlane & Kekwaletswe (2012) speak of a need for a more ubiqitous LMS which can accommodate different user devices (i.e. laptops. Desktops, smart phones, PDAs, etc.) but does not compromise data use and quality of learning experience. Management together with ETIU and ICT need to ensure that lecturers become more confident in the LMS tool so that they may see the rewards of their efforts undertaken to create new activities and re-design curricula. The current state of infrastructure influences LMS perception because it results in a low confidence in the educational tool because there is no guarantee the LMS will work properly when needed.

Secondly, the *institutional*, which in this case is the adoption process which lacks easily accessible guidelines and/or policies which results in a un-focused adoption approach. Internal and External contradictions were identified with respect to personal motivation for LMS use. Lecturers need to be aware of structural guidelines which address all aspects of LMS integration, there is a need for time allocation to be integrated into their workload assignments in order to accommodate the pedagogical shift and instructional design. Internal contradiction exists in the form of shifting from traditional teaching when a lecturer realises that LMS integration does not work well with traditional praxis. Heads of Department should be in a position to allocate staff adequate time to support LMS integration. External contradiction sources are identified where the institution pushes for increased student enrolments and LMS use but do not provide adequate infrastructure and appropriate procedural guidelines. ICT and lab technicians should be aware of how they contribute towards ensuring successful LMS integration through the maintenance and improvement of ICT infrastructure. The institutional mandate to increase enrolment of students is understood by lecturers but visible direct investment into improving and increasing constrained infrastructure and resources negates the personal motive to integrate LMS in teaching. Bozalek & Ng'ambi (2013) rightly propose the need to elect individuals who are empowered to serve as motivors for each stakeholder group in the LMS integration process, the ETIU cannot do this alone. Workload policies at departmental level should take into account the time needed to develop and administer blended learning activities, departmental policies should reflect how existing and new staff should be trained and supported for LMS

integration, and institutional policies should reflect their commitment to successfully drive the LMS integration strategy.

Thirdly, the *pedagogical*, lecturers encounter the internal contradiction of choosing the most appropriate teaching method which works best to support LMS integration. This internal contradiction is highlighted by the fact that lecturers are aware that they need to invest time to successfully prepare for LMS adoption and this needs a change from traditional teaching methods. The second perception is that LMS integration is very time consuming and current workloads cannot support its successful implementation.

This research identified digital literacy as a contributor in influencing the perception of LMS. Lecturers come with cultural historical artefacts which influence their perception of ICT in education. Brown & Czerniewicz (2010) allude to the existance of *digital aparthied*, for which Helsper (2011) calls for the need for digital inclusion to create urgency for lecturers to be more personally motivated to adopt LMS. Due to a low or no level of ICT literacy and exposure to LMS integration causes some non-IT lecturers to resist the call for LMS integration because they may not want to expose their levels of ICT literacy.

Findings from this research show that lecturers perception towards LMS are influenced by the process used to select the institutional LMS. In Chapter 3, Rogers (1983) identifies the need to minimize uncertainty so as to increase successful diffusion. The top-down approach used to bring LMS to the institution has caused lecturers to be weary of the suitability of Blackboard for the context. If the community within the Activity System do not have buy-in then there is bound to be resistance to adopt LMS integration. As discussed in Chapter 3, the choice to have an institutional LMS and the choice of LMS tool was taken at senior management level together with an external stakeholder. This process placed the ownership with management and not with all key stakeholders. Management attempted to share ownership by asking stakeholders to give Blackboard an institutional name which resulted in the name *WiSeUp*. The share of ownership for LMS integration is discussed in the work of (Bozalek & Ng'ambi, 2013; Mlitwa, 2007b; Wagner, et al., 2008; Marsden, et al., 2011; Kizito, 2002;) which alludes to the need for shared responsibilities for promoting LMS uptake. Lecturers comprehend the benefit of LMS adoption but do not like being told what to do. 45% of respondents felt Blackboard is not appropriate for the existing context. The experiences of other African universities who have gone through more than one LMS tool

trying to find the “perfect” fit did not incentivize key stakeholders, provided limited support and/or assumed success based on developed world outcomes (Marsden, et al., 2011; Kituyi & Kyeyune, 2012; Dagada & Mungai, 2013; Mlitwa, 2007b).

Blackboard is a proprietary software and therefore comes with added costs and is rigid with respect to customization. The experiences detailed in the work of Mlitwa (2007b), Kituyi & Kyeyune (2012) and Brown & Czerniewicz (2009) identify the pitfalls of using a top-down approach which lead to limited feature use of LMS and a slow shift to a more suitable pedagogy by lecturers. If key stakeholders do not have ownership this influences their perception towards the LMS tool. The perception is that Blackboard is a tool for advanced world institutions with state-of-the-art computer and data networks, this leaves lecturers trying to find identity in a tool that they feel is not fashioned for their true needs.

Staff are personally and/or institutionally motivated to adopt LMS in teaching because they generally understand the benefits but this does not always translate into actual or full adoption or an increase in the rate of uptake. Lecturers have not increased the number of subjects migrated towards LMS integration. Each lecturer has a minimum of 3 subjects to teach each week which corresponds to a minimum of 21 periods a week. 55% of respondents have only integrated 1 subject in LMS. There is a need for a more focused training which targets course complexities so that further benefits of LMS integration can be visualized beyond sharing material, gradebook, and at-risk- tracking functionality. This training needs to be mandatory and form part of the orientation programme for new academic staff to the institution and for courses which may already be integrated because from the 64% of respondents who have had basic LMS training only 55% of respondents would like further training. Focused training could influence personal motivation to adopt LMS in teaching praxis (Weaver, et al., 2008).

Digital literacy influences resistance to change. Departments other than the IT department have some staff with low to no ICT literacy skills. This can be attributed to the digital divide especially considering the research context. Socio-economic factors contribute towards the widening gap in this Information age, it is therefore important for LMS implementers to take into consideration the fact that cultural historical artefacts which lecturers and students come with may impede the rate at which ICT use is needed/wanted/used (Helsper, 2011; Veletsianos, 2010; Brown & Czerniewicz, 2005;). In order for students from disadvantaged

backgrounds to be motivated to use LMS, academics need to have the confidence to successfully integrate LMS into their pedagogy. ETIU does not provide ICT literacy courses but CLTD can promote the increased availability of short courses to meet immediate needs.

Limitations of Study

The data collection instruments designed for this research were a survey and face-to-face interview. In recent time WSU was under administration due to various management and operational reasons. During and immediately after this period the institution was plagued with institution-wide shut downs due to concerns from students and staff at various points throughout the academic year together with an increased staff turn-over. These had a negative impact on time constraints which affected the rate and level of responses by participants due to pressures from high workload allocations, rescheduling of class times to catch up on lost time. This rendered it impossible to get full commitment from participants in the survey and face-to-face interviews.

Not all tensions were explored further due to the fact that some of the views held by respondents in the questionnaire could not be engaged with further in the face-to-face interviews due to lack of availability and scope of research based in the nature of literature discussed in Chapter 2 and 3. These include insights into specifics over the LMS training needed. According to respondents, training needed to be more accommodative with respect to subject complexities as opposed to a generalized approach and how this impacts the motive to either adopt or not adopt LMS in teaching. There was no substantive research on staff development approaches for LMS adoption. This includes areas such as curriculum re-design and subject-based LMS training.

Respondents highlighted the relevance of choosing Blackboard over other LMS options, this research did not investigate this aspect of building an affordability matrix to gauge the cost effectiveness of a wider range of LMS tools and how this cost impacts the motive for LMS adoption amongst lecturers. This research did not intend on reviewing the framework but rather the motives of use.

The choice of research sample was restricted to lecturers and therefore did not consider the dynamics of how student demand for LMS use can impact the motive for a lecturer to adopt LMS.

Recommendations

The tertiary educational landscape is evolving globally and the trend to integrate emerging educational technologies to overcome common pressures is prevalent. The integration of LMS in teaching can support academic institutions in meetings these pressures by allowing for a blended learning approach thus assisting in alleviating the demand on a limited resource and infrastructure base.

From the summary of findings and conclusion, recommendations can be made to CLTD and ETIU to review the LMS adoption process in order for it to be more effective in influencing lecturer perceptions. CLTD needs to make ICT literacy training more accessible to staff who can be empowered to use ICTs especially integrating LMS. They should build an affordability matrix through an inclusive process so as to measure the relevancy of Blackboard. ETIU needs to consider making staff training at intermediate and advanced level more specific to the complexities of subjects so that lecturers visualize further benefits of LMS integration. ETIU needs to conduct a quality of LMS use survey to see where to make adjustments in LMS training and roll-out.

Recommendations to Heads of Department can be to ensure that staff workload allocations incorporate LMS integration activities (i.e. developing activities, managing course content, developing assessments etc.). This can only be successful if at an institutional level there are guidelines for LMS integration. These guidelines should highlight concerns of workload allocation; compel ICT department to improve the state of campus networks; empower lab technicians to get the appropriate support to ensure that mechanisms are in place for computer lab maintenance; and sensitize students to use LMS in their learning. This way lecturers can see how their personal motivation matches the motivational influences from other key stakeholders in the LMS integration Activity System.

Recommendations to academics can be that they should upskill in ICT literacy to remain relevant in the Information age. DHET has made it a point to have 21st Century learning take place in HE, bridging the digital exclusion will promote a faster LMS adoption.

Recommendations for future research work can be applied to determining effective LMS training approaches for lecturers to produce quality education outputs and secondly, research into developing an appropriate framework for LMS integration in developing countries.

REFERENCES

Anderson, T. & Dron, J., 2010. Three Generations of Distance Education Pedagogy. *The International Review of Research in Open and Distributed Learning,* XII(3), pp. 80-97.

Blin, F. & Munro, M., 2008. Why hasn't technology disrupted academics' teaching practices? Understanding resistance to change through the lens of activity theory. *Computers & Education,* L(2), pp. 475-490.

Bødker, S., 1995. *Applying activity theory to video analysis: how to make sense of video data in human-computer interaction. In Context and consciousness, Bonnie A. Nardi (Ed.).* Cambridge(MA): Massachusetts Institute of Technology.

Bozalek, V. & Ng'ambi, D., 2013. Leveraging informal leadership in higher education institutions: A case of diffusion of emerging technologies in a southern context. *British Journal of Educational Technology,* XLIV(6), pp. 940-950.

Brown, C. & Czerniewicz, L., 2005. *Access to ICTs for teaching and learning – from single artefact to inter-related resources,* s.l.: Unpublished.

Brown, C. & Czerniewicz, L., 2009. Intermediaries and Infrastructure as Agents: The Mediation of E-learning Policy and use by Institutional Culture. In: *Transforming Higher Education Through Technology-enhanced learning.* York: The Higher Education Academy, pp. 107-121.

Brown, C. & Czerniewicz, L., 2010. Debunking the 'digital native': beyond digital apartheid, towards digital democracy. *Journal of Computer Assisted Learning,* pp. 357-369.

Brown, C. & Czerniewicz, L., 2014. The Habitus and Technological Practices of Rural Students: A Case Study. *South African Journal of Education,* 34(1).

Butler, R. & Cowan, P., 2013. *Using Activity Theory to Problematize the Role of the Teacher During Mobile Learning.* London: SAGE.

Carliner, S., 2005. *Course Management Systems Versus Learning Management Systems,* Virginia: Learning Circuits.

CHE, 2010. *HE Monitor No. 9: Access and throughput in South African Higher Education: Three case studies,* Pretoria: Council for Higher Education.

Christie, M. & Juardo, R. G., 2011. Lecturer engagement in the use of interactive tools in learning management systems. A Swedish case study. pp. 234-238.

Creswell, J. W., 2006. Five Qualitative Approaches to Inquiry. In: *Qualitative Inquiry and Research Design: Choosing among Five Approaches.* 2nd ed. London: SAGE, pp. 53-84.

Creswell, J. W. & Plano Clark, V. L., 2008. The Evolution of Mixed Methods Research. In: *The Mixed Methods Reader.* London: SAGE, pp. 1-18.

Dagada, R. & Mungai, P., 2013. Learning Management System Implementation Framework for Higher Education-Case of University of the Witwatersrand. *International Journal of e-Education, e-Business, e-Management and e-Learning,* III(2), pp. 151-154.

DHET, 2010. *Revised Strategic Plan 2010/11 - 2014/15 and Operational Plans for the 2011/12 Financial Year,* Pretoria: Department of Higher Education & Training.

DHET, 2013. *White Paper for Post School Education and Training Pretoria: Building an expanded, effective and intergrated post-school system,* Pretoria: DHET.

DOE, 2001. *Education in South Africa: Achievements since 1994,* Pretoria: Department of Education.

Elliott, R. & Timulak, L., 2005. Descriptive and interpretive approaches to qualitative research. *A handbook of research methods for clinical and health psychology,* pp. 147-159.

Engeström, Y., 1987. *Learning by Expanding: An Activity-theoretical Approach to Developmental.* Helsinki: Orienta-Konsultit.

Engeström, Y., Miettinen, R. & Punamäki, R., 1999. *Perspectives on Activity Theory.* Cambridge: Cambridge University Press.

Gonçalves, A. M. & Pedro, P., 2012. Innovation, e-Learning and Higher Education: An Example of a University LMS Adoption Process. *Proceedings of World Academy of Science, Engineering and Technology,* Issue 66, pp. 258-265.

Hardman, J., 2005. Activity Theory as a framework for understanding teachers'perceptions of computer usage at a primary school level in South Africa. *South African journal of education.*

Helsper, E. J., 2011. *Digital Disconnect: Issues of Social Exclusion, Vulnerability and Digital (Dis)engagement.* Brno, Digital Disconnect: Networking European Citizens Programme.

Horn, M. B. & Staker, H., 2012. *Classifying K–12 Blended Learning,* California: Innosight Institute.

Jaffer, S., Ng'ambi, D. & Czerniewicz, L., 2007. The role of ICT in Higher Education in South Africa: One strategy for addressing teaching and learning challenges. *International Journal of Education and Development using Information and Communication Technology (IJEDICT),* III(4), pp. 131-142.

Jaros, M., McLeod, C. & Stretch, D., 2013. Teaching design skills at UKZN: a community effort. *South African Institution of Civil Engineering,* XXI(8), pp. 62-67.

Johnson, L. & Smith, R., 2005. *The 2005 horizon report,* Texas: The New Media Consortium.

Johnson, L. & Smith, R., 2010. *The 2010 horizon report,* Texas: The New Media Consortium.

Kaptelinin, V. & Nardi, B., 2006. Activity Theory and Interaction design. In: *Activity theory in a nutshell. Acting with technology.* Massachusetts: MIT press, pp. 29-72.

Karasavvidis, I., 2009. *Activity Theory as a theoretical framework for the study of blended learning: a case study.* Halkidiki, International Conference on Networked Learning, pp. 195-202.

Kelliher, F., 2005. Interpretivism and the Pursuit of Research Legitimisation: An Integrated Approach to Single Case Design. *The Electronic Journal of Business Research Methodology,* III(2), pp. 123-132.

Killewo, L. et al., 2014. Introduction of a learning management system at the Kilimanjaro Christian Medical University College. *African Journal Of Health Professions Education,* VI(1), pp. 37-40.

Kituyi, G. M. & Kyeyune, R., 2012. An Analysis of E-learning Information System Adoption in Ugandan Universities: Case of Makerere University Business School. *Information Technology Research Journal,* II(1), pp. 1-7.

Kizito, R., 2002. Barriers to the adoption of computer-mediated collaborative learning practices in open and distance education. *Progressio,* XXII(2), pp. 10-17.

Kuutti, K., 1996. *Activity theory as a potential framework for human-computer interaction research, Context and consciousness: activity theory and human-computer interaction,* Massachusetts: MIT Press.

Lim, C. P., 2002. A theoretical framework for the study of ICT in schools: a proposal. *British Journal of Educational Technology,* XXXIII(4), pp. 411-421.

Macfadyen, L. & Dawson, S., 2012. Numbers Are Not Enough. Why e-Learning Analytics Failed to Inform an Institutional Strategic Plan. *Educational Technology & Society,* XV(3), pp. 149-163.

Macharia, J. & Nyakwende, E., 2010. Vice-Chancellors Influence on Academic Staff Intentions to Use Learning Management Systems (LMS) For Teaching and Learning. *The Journal of Language, Technology & Entrepreneurship in Africa,* II(1), pp. 220-230.

Marsden, G., Ssekakubo, G. & Suleman, H., 2011. *Issues of Adoption: Have E-Learning Management Systems Fulfilled their Potential in Developing Countries?.* s.l., SAICSIT.

Maxwell, J. A., 2008. Designing a qualitative study. In: L. Bickman, ed. *The Sage handbook of applied social research methods.* London: Sage, pp. 214-253.

McDavid, J. C. & Hawthorn, L. R., 2005. Applying Qualitative Evaluation Methods. In: *Program Evaluation and Performance Measurement: An Introduction to Practice.* London: SAGE, pp. 165-200.

Mlitwa, N., 2007a. Technology for teaching and learning in higher education contexts: Activity theory and actor network theory analytical perspectives. *International Journal of Education and Development using Information and Communication Technology (IJEDICT),* III(4), pp. 54-70.

Mlitwa, N., 2007b. *e-Learning and learning management system s (LMS) in a changing higher education environment.* Cape Town, SACLA.

Mlitwa, N. & van Belle, J. P., 2010. A Proposed Interpretivist Framework to Research the Adoption of Learning Management Systems in Universities. *Communications of the IBIMA,* pp. 1-11.

Moore, J. L., Dickson-Deane, C. & Galyen, K., 2011. e-Learning, online learning, and distance learning environments: Are they the same?. *The Internet and Higher Education,* XIV(2), pp. 129-135.

Mtebe, J. S. & Raisamo, R., 2014. A model for assessing Learning Management System success in Higher Education in Sub-Saharan countries. *The Electronic Journal of Information Systems in Developing Countries,* LXI(7), pp. 1-17.

Nuffic, 2012. *Programme Outline: Netherlands Initiative for Capacity Development in Higher Education (NICHE) in South Africa,* The Hague: Nuffic.

Patton, M., 1990. *Qualitative evaluation and research methods.* CA: Sage.

Phahlane, M. M. & Kekwaletswe, R. M., 2012. Contextualized Framework for Ubiquitous Learning Support Using a Learning Management System. *International Journal of Computer and Information Technology,* I(2).

QSR, 2013. *NVivo 10.* QSR ed. Victoria: QSR.

Rambe, P., 2012. Activity theory and technology mediated interaction: Cognitive scaffolding using question-based consultation on Facebook. *Australasian Journal of Educational Technology,* XXVIII(8), pp. 1333-1361.

Rogers, E. M., 1983. *Diffusion of Innovations.* New York: Free Press.

Roth, W. & Lee, Y. L., 2007. Vygotsky's neglected legacy: Cultural Historical Activity Theory. *Review of Educational Research,* LXXVII(2), pp. 186-232.

Russell, D. L. & Schneiderheinze, A., 2005. Understanding innovation in education using activity theory. *Educational Technology & Society,* VIII(1).

Russell, D. R., 2004. Looking Beyond the Interface: Activity Theory and Distributed Learning. In: M. Lea & K. Nicoll, eds. *Psychology of Education.* London: RoutledgeFalmer, pp. 309-325.

Sayre, S., 2001. *Qualitative Methods for Marketplace Research.* London: SAGE.

Veletsianos, G., 2010. A Definition of Emerging Technologies for Education. In: *Emerging Technologies in Distance Education.* Canada: Athabasca University Press, pp. 3-23.

Vygotsky, L. S., 1978. Interaction between learning and development. In: *Mind in Society.* MA: Harvard University Press, pp. 79-91.

Wagner, N., Hassanein, K. & Head, M., 2008. Who is responsible for E-Learning Success in Higher Education? A Stakeholders' Analysis. *Educational Technology & Society,* XI(3), pp. 26-36.

Weaver, D., Spratt, C. & Nair, C., 2008. Academic and student use of a learning management system: Implications for quality. *Australasian Journal of Educational Technology,* XXIV(1), pp. 30-41.

WSU, 2006. *Centre for Learning and Teaching Development: Founding Document,* Mthatha: Walter Sisulu University.

WSU, 2009. *Education Technology And Innovation Unit Institutional e-Learning Strategy,* Mthatha: Walter Sisulu University.

WSU, 2011. *WiSeUp e-Learning Support Procedures,* Mthatha: Walter Sisulu University.

APPENDIX A

Information Sheet

Research Title: Adoption of Learning Management Systems among Information Technology Educators at a Rural South African University: An Activity Systems Perspective

Researcher: RM Ngandu

Supervisor: Prof. C Brown

Institution: University of Cape Town

Overview:

You are invited to take part in a research study on investigating phenomenon that influence the perception of Learner Management Systems (LMS) use in Higher Education. The context of this research is intended for Information Technology (IT) lecturers at Walter Sisulu University (WSU). I am a member of staff at WSU and I work in the IT department on Ibika campus. Your open and honest participation in this research forms an integral part of the research process.

WSU is in the process of rolling out LMS use in the classroom to enhance teaching and learning, I would like to establish through this research whether there are any phenomenon that influence the use, extent of use and lack of use amongst members of the IT department.

Expectations:

If you choose to participate, you will be asked to provide your insight and sentiment on the current implementation process of LMS use in the classroom. I would like to get your personal thoughts and motive for using or not using the LMS as part of your pedagogy. Some of your responses may be sensitive in nature and for that reason this research is bound to follow the ethical guidelines prescribed by the University of Cape Town.

The intention of this research is to conduct a survey that provides background information on views of learning principles, instructional techniques, and experiences in using emerging technologies for teaching and learning. A follow up survey will be conducted using face-to-face interviews with 4 – 6 lecturers from varying age groups, LMS use experience, and pedagogy. The survey will not require the use of names and thereby making it difficult for anyone other than the researcher to identify the participant. The face-to-face interviews will be recorded on a digital audio recorder. The information shared will be kept and used only by the researcher. If there is a need to share collected information with stakeholders outside of this research scope then consent will have to be approved by each participant.

Timeframe:

It is envisaged that the duration of questionnaire completion will be not more than 15 minutes. Selected participants will be invited to participate in a face-to-face interview.

Rights

At any point in the research process you may freely decide to stop participating in the research study and no reason is required. As such, any information collected can be retracted and destroyed if you wish. Your participation is still appreciated regardless of circumstances that may arise during the survey.

You have a right to ask clarity seeking questions from the researcher, your input is valuable to this research and will provide further insight into phenomenon that exist within this research area.

Benefits and Risks:

There are no known benefits or risks known for you. Participation in this research does not diagnose or deliberately seek to identify any physical or psychological facts about participants.

Confidentiality and Anonymity:

The information collected through the questionnaire will not have any direct link to you. In order to ensure this, all participants' real names will be disguised. All data collected will be

used in such a way that no direct inferences to participants will be made. This is especially important when presenting at conferences and contributing to publications.

Further Information:

If you need any further information feel free to contact Prof. Cheryl Brown who is the supervisor for this research study. She can be contacted via email address: cheryl.brown@uct.ac.za or called on +27 21 650 5035

Consent:

By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

_____

Participant's Name (Printed)*

_____ _____

Participant's signature* Date

_____ _____

Name of person obtaining consent (Printed) Signature of person obtaining consent

**Participants wishing to preserve some degree of anonymity may use their initials and alternate signature*

SURVERY INSTRUMENT: QUESTIONNAIRE

The purpose of this questionnaire is to gather information from academic staff of the Information Technology department at Walter Sisulu University, who form the target population of study. In particular, answers are sought from questions relating to staff prior knowledge, integration of and use of ICT in the classroom environment; expectations and experience in using Learning Management Systems in their teaching practice.

Please complete all sections

Section A: Personal Data

This information will be used for this research only. Please mark with an **X** in the appropriate blocks which you deem represent your status quo.

1. Please indicate your gender.

Male	**1**	Female	**2**

2. Please indicate your age group.

24-28	**1**	29-32	**2**	33-36	**3**	37-40	**4**	41-50	**5**	Over 50	**6**

3. Please indicate your language(s).

Xhosa	**1**	English	**2**	Zulu	**3**	Afrikaans	**4**	Other (specify)_____	**5**

4. Please indicate your lecturing and/or teaching experience in years (y) and months (m).

5. Please indicate how long you have been in the WSU IT department in years (y) and months (m).

6. How would you rank your ICT literacy?

Advanced	**3**	Intermediary	**2**	Basic	**1**

Section B: Experience

7. In your own words what is an LMS.

_____

_____

_____

_____

8. What do you think is the role(s) of an LMS is in teaching and learning?

_____

_____

_____

_____

9. How effective was your experience of being taught using LMS?

Very effective	**5**	Somewhat effective	**4**	Somewhat ineffective	**3**	Very ineffective	**2**	Never taught	**1**

10. What was your skills level of LMS training/use before you joined WSU?

Very high	**5**	High	**4**	Low	**3**	Very low	**2**	None	**1**

11. Please indicate whether you think Blackboard is an appropriate LMS tool for WSU. (provide reason(s) for your answer and/or recommend another LMS tool(s))

Yes	**3**	No	**2**	I do not know	**1**

_____

_____

_____

_____

12. Is the motivation for LMS use a personal choice or an institutional mandate? (give reasons for your answer)

Personal	**5**	Institutional	**4**	Both but more personal	**3**	Both but more institutional	**2**	Both	**1**

_____

_____

_____

_____

13. Please indicate what level of LMS training you have received from CLTD.

Advanced	**4**	Intermediary	**3**	Basic	**2**	None	**1**

14. Was the training helpful in motivating and assisting you with LMS integration?

Very helpful	**4**	Somewhat helpful	**3**	Not helpful	**2**	Never trained	**1**

15. Do you think academic staff are prepared/ready for LMS integration? (give reasons for your answer)

Yes	**3**	No	**2**	I do not know	**1**

_____

_____

_____

_____

16. Please indicate the advantage(s) of using LMS in your classroom.

_____

_____

_____

_____

17. Please indicate the disadvantage(s) of using LMS in your classroom.

_____

_____

_____

_____

18. How many courses have you integrated LMS into your teaching practice?

19. Explain the impact LMS integration has had on the courses you have used it in.

_____

_____

_____

_____

20. Is the current network infrastructure up-to-date? (elaborate and recommend)

Yes	**3**	No	**2**	I do not know	**1**

_____

_____

_____

_____

21. What ICT infrastructure do you have access to in the office and classroom?

Internet	**4**	Mobile phone	**3**	Fixed phone	**2**	Other _____ _____	**1**

22. What ICT infrastructure do you have access to at home?

Internet	**4**	Mobile phone	**3**	Fixed phone	**2**	Other _____ _____	**1**

23. What are the institutional and departmental guidelines on LMS integration? (elaborate and recommend)

_____

_____

_____

_____

24. When I have a problem with the LMS system I know who to contact. (elaborate or comment)

Yes	**3**	No	**2**	I do not know	**1**

_____

_____

_____

_____

25. I have adequate time to prepare LMS-based learning activities. (elaborate and recommend)

Yes	**3**	No	**2**	I do not use LMS	**1**

_____

_____

_____

_____

26. Which LMS features do you use in your teaching practice?

Share material	**5**	Use gradebook	**4**	Use discussion forums	**3**	Use monitoring & tracking	**2**	Conduct assessments and surveys	**1**

27. How much time do you dedicate to work on the LMS for a single subject?

Above 5 hours per week	**5**	2 – 3 hours a week	**4**	1 – 2 hours a week	**3**	Below 1 hour a week	**2**	Do not use LMS	**1**

--- Section C: Expectations ---

28. LMS will be used by almost all lecturers within some years.

Agree in full	**5**	**4**	**3**	**2**	**1**	Do not agree at all

29. LMS can help improve performance and results of students in your course.

Agree in full	**5**	**4**	**3**	**2**	**1**	Do not agree at all

30. Would you like to get more education and support to be able to use a LMS to a full extent?

Agree in full	**5**	**4**	**3**	**2**	**1**	Do not agree at all

31. What outcomes would you like LMS integration to produce in future?

_____

_____

_____

---- End of Questionnaire ---------- Thank You ----

APPENDIX B

Information Sheet

Research Title: Adoption of Learning Management Systems among Information Technology Educators at a Rural South African University: an Activity Systems Perspective

Researcher: RM Ngandu

Supervisor: Prof. C Brown

Institution: University of Cape Town

Overview:

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WSU is in the process of rolling out LMS use in the classroom to enhance teaching and learning, I would like to establish through this research whether there are any phenomenon that influence the use, extent of use and lack of use amongst members of the IT department.

Expectations:

If you choose to participate, you will be asked to provide your insight and sentiment on the current implementation process of LMS use in the classroom. I would like to get your personal thoughts and motive for using or not using the LMS as part of your pedagogy. Some of your responses may be sensitive in nature and for that reason this research is bound to follow the ethical guidelines prescribed by the University of Cape Town.

The intention of this research is to conduct a survey that provides background information on views of learning principles, instructional techniques, and experiences in using emerging

technologies for teaching and learning. A follow up survey will be conducted using face-to-face interviews with 4 – 6 lecturers from varying age groups, LMS use, and pedagogy. The initial survey will not require the use of names and thereby making it difficult for anyone other than the researcher to identify the participant. The face-to-face interviews will be recorded on a digital audio recorder. The information shared will be kept and used only by the researcher. If there is a need to share collected information with stakeholders outside of this research scope then consent will have to be approved by each participant.

Timeframe:

It is envisaged that the duration for the face-to-face interview will not be more than 45 minutes. After each face-to-face session, the participants should expect a one week turnaround time in order to transcribe the interview. Each transcription will need to be approved by the participant involved before it can be used to form part of the research study.

Rights

At any point in the research process you may freely decide to stop participating in the research study and no reason is required. As such, any information collected can be retracted and destroyed if you wish. Your participation is still appreciated regardless of circumstances that may arise during the survey and/or interview.

You have a right to ask clarity seeking questions from the researcher, your input is valuable to this research and will provide further insight into phenomenon that exist within this research area.

Benefits and Risks:

There are no known benefits or risks known for you. Participation in this research does not diagnose or deliberately seek to identify any physical or psychological facts about participants.

Confidentiality and Anonymity:

The information collected through the survey will not have any direct link to you as an individual. The recorded face-to-face interview will be transcribed and once approved the

recorded data will be destroyed, therefore no direct link can be traced to an individual participant.

All data collected will be used in such a way that no direct inferences to participants will be made. This is especially important when presenting at conferences and contributing to publications.

Further Information:

If you need any further information feel free to contact Prof. Cheryl Brown who is the supervisor for this research study. She can be contacted via email address: cheryl.brown@uct.ac.za or called on +27 21 650 5035

Consent:

By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

_____

Participant's Name (Printed)*

_____ _____

Participant's signature* Date

_____ _____

Name of person obtaining consent (Printed) Signature of person obtaining consent

**Participants wishing to preserve some degree of anonymity may use their initials and alternate signature*

SURVERY INSTRUMENT: INTERVIEW QUESTIONNAIRE

The purpose of this questionnaire is to gather information from academic staff of the Information Technology department at Walter Sisulu University, who form the target population of study. In particular, answers are sought from questions relating to staff prior knowledge, integration of and use of ICT in the classroom environment; expectations and experience in using Learning Management Systems in their teaching practice.

Please complete all sections

Section A: Experience

1. In your own words what is blended learning?

_____

_____

_____

_____

2. In your own words what is an LMS.

_____

_____

_____

_____

3. What do you think is the role(s) of an LMS is in teaching and learning?

_____

_____

_____

4. Do you feel LMS use is motivated by personal choice or institutional mandate?

5. How effective has the training you have received from CLTD been?

6. How helpful was the training you received? Did it motivate and assist you with LMS integration?

7. How prepared/ready do you think academic staff are for LMS integration?

8. What impact has LMS integration had on the courses you have used it in before? Would you recommend other lecturers to integrate LMS?

9. Explain whether the current network infrastructure influences your LMS use

10. Does your student ICT literacy and access influence your LMS use?

11. What are the institutional and departmental guidelines on LMS integration?

12. Do you feel there is adequate support for the LMS? (When I have a problem with the LMS system I know who to contact)

13. I have adequate time to prepare LMS-based learning activities.

14. How do you use LMS features in your teaching practice?

--- Section B: Expectations ---

15. What do you want your department/CLTD/university needs to do with respect to LMS adoption?

16. What improvements would you like to see in the LMS to make it more effective/attractive?

_____

_____

_____

_____

17. What outcomes would you like LMS integration to produce?

_____

_____

_____

_____

---- End of Questionnaire ---------- Thank You ----

APPENDIX C

Survey Summary

SECTION A

Gender	Male	8
	Female	3
Age Group	24-28	0
	29-32	3
	33-36	4
	37-40	1
	41-50	1
	Over 50	2
Language Use	Xhosa	2
	English	10
	Zulu	0
	Afrikaans	0
	Other	1
Lecturing Experience	0-3	0
	3-6	3
	6-10	3
	10+	5
WSU Employment	0-3	0
	3-6	5
	6-10	3
	10+	3
ICT Literacy	High	8
	Medium	2
	Low	0

SECTION B			
Understanding of LMS	Respondant 1	Elaborate	LMS is an online application for the teachning, training, e-learning or e-tutoring
	Respondant 2		LMS is a tool used to enhance teaching and learning inside and outside a classroom
	Respondant 3		Software that can be used to do any/all of the following: provide online course content and links to content; provide learner discussion/blog facilities; provide online assessment and evaluations; be used to record learner results
	Respondant 4		Integrating technology into teaching in a classroom
	Respondant 5		A electronic delivery system for course content and assessment. There are also other features to help students with commonly asked questions
	Respondant 6		A management tool (software) for administration of e-learning
	Respondant 7		It is a system which uses ICT tools to enhance teaching and learning techniques
	Respondant 8		It's a system that is used to help and facilitate the teaching and learning process for both lecturer and students
	Respondant 9		LMS involves lot of processes that are associated with learning and also enabling the delivery of learning content
	Respondant 10		LMS is a software application that assist in administering / documenting / delivering e-learning
	Respondant 11		It is an e-learning platform used in education to support face to face contact time
Role of LMS in T&L	Respondant 1	Elaborate	LMS is a good tool to use for sharing study material, discussion forums and for managing training and educational records
	Respondant 2		It is to be used as a complementary tool to enhance teaching in any classroom and also enhance/aid learning for learners
	Respondant 3		It should be used to stimulate constructivism and learner-centered teaching in addition to providing resources, self-assessment tools, group communication
	Respondant 4		Is to engage both lecturer and student in the learning process
	Respondant 5		It should supplement T&L
	Respondant 6		To enable learners to have better access to learning material and for teachers to better deliver and monitor the learning process
	Respondant 7		To assist the traditional teaching and learning

			techniques
	Respondant 8		Is to facilitate and making convinient the teaching and learning by making sure that students get material on time nd they can be able to submit on time anywhere there's network connection
	Respondant 9		The role of LMS is to make the assessment easier and manage the competence of the students
	Respondant 10		The role is to augment / supplement face-to-face learning in a blended learning environment. It should not be seen as a complete replacement for f-to-f learning in a rural university
	Respondant 11		Main role surely is to complement the face to face theoratical lessons

Effectiveness of LMS experience	Very effective	5
	Somewhat effective	2
	Somewhat ineffective	1
	Very ineffective	0
	Never taught	3

LMS training before WSU employment	Very high	0
	High	4
	Low	2
	Very low	3
	None	2

Appropriateness of BlackBoard	Yes	6	Yes, blackboard works fine and it good tool for LMS
			Since WSU serves mostly rural student it will help expose students to technology
			It is appropriate because it allows us to post material any time. It is also appropriate as it facilitates the teaching and learning process but there is still improvements needed in the form of non-functional requirements like performance or response time
			Because it encourages the the constructive approach to knowledge acquisition and support active learning blogs, student forums

			It has got the tools to assist / support the blended learning I wanted to implement in my course. But cost of Blackboard needs to be considered. Thus the potential use of an open-source alternative such as moodle could be investigated
			It has most LMS features (evaluations, score sheets, document download etc)
	No	3	The current network infrastructure hinders the use of Blackboard
			It would be better if Blackboard had mobile apps as most students cannot access it outside the lab environment
			I find Blackboard "cumbersome" and "old-fashioned" - not "intuitive". According to my understanding it is also very resource intensive and expensive (very!). I have used moodle (as a learner and as a course "creator") and found it much more user-friendly
	I do not know	2	I really don't know if Blackboard is a best-fit for WSU since the infrastructure doesn't support it
			There are many LMS tools which may be appropriate for WSU than Blackboard. It is appropriate to try-out at least three LMS tools to determine one suitable for the institution
Source of motive to use LMS	Personal	2	Based on experience
			The university does not require (yet) staff to use it as most are still untrained on it
	Institutional	4	It is an institutional choice
			I use the LMS (Blackboard) cause it is the mandate from my supervisor and that the subject that I teach was chosen to be used as a pilot for the system within the department
			Academic staff not consulted in choosing Blackboard as LMS tool for WSU
			Because technology changes both the ways in which we learn and the ways in which we conceive the learning process
	Both but more personal	3	To help me keep up with technology
			It is institutional because CLTD department promotes or motivates its use and even provide training but personal because not everybody is using it
			The institution try to promote, in my case, it was my personal choice. I needed an LMS to promote collaboration among learners

	Both but more institutional	2	With the current network infrastructure problems, it is almost impossible to effectively use Blackboard. We are instructed to use it as there is an institutional mandate
			There is a drive from the institution and the faculty to deliver courses on LMS platform
	Both	0	

CLTD training received	Advanced	1
	Intermediary	2
	Basic	7
	None	1

CLTD training motivating	Very helpful	3
	Somewhat helpful	6
	Not helpful	1
	Never trained	1

Staff ready/prepared for LMS integration	Yes	3	Given the minimal amount of computer literacy required for LMS, I'd say all academic staff are ready for this
			Because LMS accomodates the diversity styles of learning and allows students to be more active in growing their own knowledge together with staff as well
			IT lecturers are supposed to be somehow ready for using LMS because it is in their field
	No	1	I don't think staff are ready for it. Because it takes long time to prepare
	I do not know	6	I really do not know, if staff is ready for the integration because of the lack of upgrading the infrastructure i.e. (computers, working network in the labs)
			More staff are prepared than previously - although many just use it as an "online filing system". Staff are frustrated because of poor facilities, e.g. labs, computers, bandwidth, e.t.c
			As IT lecturers, we welcome the use of technology for T&L. But I cannot say it is the same for other staff at the university
			Most academic staff still use the traditional way of teaching and learning
			Given the slow adoption rate seen thus far in WSU, I am not too sure academics generally are ready. It could be that a mind-set change is what required

Advantages of LMS	Respondant 1	Elaborate	Well enough I have not used it, I can say that it helps to lecture even if the tutor is not present. The tutor can deliver the class material through online-internet
	Respondant 2		It will be very advantageous to have and use it because learning for students won't be only confined in classrooms but outside and it can be done at their own pace and at anywhere and anytime
	Respondant 3		As indicated previously it can stimulate constructivism and activity-based leraning; provide access to many additional resources; allow self-assessment; central submission of assignments; some degree of "auto marking", e.t.c off-site access
	Respondant 4		It catches the attention of students
	Respondant 5		Easier to distribute assignments and announcements
	Respondant 6		Easy distribution of class notes, easy tracking and monitoring of students progress
	Respondant 7		Students are able to access lecture slides and assignments easily
	Respondant 8		It helps in the distribution of material hence reducing hardcopies, I can post/load exercices, notes and assignments abd students retrieve those any time and the even submit via LMS
	Respondant 9		Allows learners in one school to communicate with learner that are in other schools. Enhancing educational outcomes and cultural integration
	Respondant 10		facilitate collaboration (even after the class room); Tracking performance; Sharing material and lecture aids (including slides); Get students prepared for the class in advance through the posting of preparatory materials;
	Respondant 11		Supplement T&L; help students to blog and ask / post questions and get answers anytime; learn other type of learning styles like computer-based and collaborative learning
Disadvantages of LMS	Respondant 1	Elaborate	It needs more time to prepare and upload the contents and both parties must have internet connection always to use it
	Respondant 2		It ca be very disruptive to the lecturer when they are presenting a lesson
	Respondant 3		Requires reasonable response time from servers/network and access to proper facilities (e.g. PCs, tablets, e.t.c)
	Respondant 4		Some students use the opportunity to use other applications like facebook therefore get distracted

	Respondant 5		The learning curve for new students
	Respondant 6		Sometimes the network can let you down
	Respondant 7		Accessibility becomes a problem if the network is slow or down
	Respondant 8		There are no exact disadvantages in terms of teaching and learning but the response time in our network is a major problem. Also the student may take time to adapt or know how to use these LMS subject to further training which consume valuable time
	Respondant 9		Lack of familiar structure and routine may take getting used. Slow or unreliable Internet connection can be frustrating
	Respondant 10		They might stop face-to-face class rooms
	Respondant 11		Students might use it for other means: social purposes; It relies on good network

Number of courses integrated with LMS	1	5
	2	2
	3	1
	4	2

Impact LMS has in T&L	Respondant 1	Elaborate	I have not yet used
	Respondant 2		There's no impact because my students are not using the tool due to the lack of working computers and no network most of the time
	Respondant 3		Learners enjoyed the group activities and other opportunities provided. Rapid evaluations allow for modifications to teaching e.t.c (for the educator). Self-assessment guides learner studies
	Respondant 4		Students have been more involving
	Respondant 5		None
	Respondant 6		Encouraged learners to have more continuous contact with the learning material
	Respondant 7		There was an improvement in the pass rate
	Respondant 8		It was good impact as students could easily get material from the system and they easily submitted assignments and I was able to load additional material for further reading but the problem was always performance of Blackboard as it fails to load something
	Respondant 9		LMS shown a positive impact to our courses and the students showed the acceptance of technology as well

	Respondant 10		There was a great impact. My students were very actively engaged on discussion forums and used such forums to discuss and clarify subject contents. High-usage during exam preparation time must have impacted on their exam performance
	Respondant 11		Slight increase on passrate on programming courses; good communications with part-time classes
Network infrastructure up-to-date	Yes	0	
	No	7	Infrastructure use is not up to date. Even the basic things are not there for the students to use
			The lab that I use for the subuject that uses LMS has no network infrastructure and less computers are working
			SANREN is only available on some sites but also impeded by other factors e.g. viruses and/or antivirus software
			Our labs are not completely connected to the network
			Wi-fi access at residences would make access a lot better
			It is on and off
	I do not know	3	It is very slow and sometimes it is down. A reliable network would be very ideal for LMS in teaching and learning
			I am not sure but what I know is that the Blackboard response is very slow, so I'm not whether this is because of network infrastructure or LMS impleementation and configuration
Access to ICT infrastructure at work	Internet	10	
	Mobile phone	1	
	Fixed phone	4	
	Other	1	
Access to ICT infrastructure at home	Internet	7	
	Mobile phone	8	
	Fixed phone	2	
	Other	1	
Institutional / Departmental	Respondant 1	El ab or	

LMS integration policies			
	Respondant 2		I don't know them
	Respondant 3		Unknown
	Respondant 4		No idea
	Respondant 5		
	Respondant 6		Not aware
	Respondant 7		
	Respondant 8		I am not sure if there any guidelines but I knw CLTD department motivates and encourages the use of LMS. I recommend that the institution should have a policy around the use of LMS. If they already have the policy they should enforce its implementation making it compulsory to use LMS by staff
	Respondant 9		There are no clear guidelines that department should use. We are told or forced to use LMS
	Respondant 10		There is a e-learning adoption policy. It is not compulsory, though there is a target
	Respondant 11		Not aware of any at departmental level, but the institutional guidelines are developed by CLTD
Do you know where to get LMS support			There is an ICT officer and he is in charge if any problems arise
			I normally contact CLTD
	Yes	9	E-learning specialists are available and are known, they usually send us e-mails
			Staff from CLTD always at hand to assist
			For any LMS system problems encountered, contact CLTD
			Yes, because there's an e-learning specialist from CLTD who helps with all problems and provide training as well
	No	0	
	I do not know	2	Well, I do know, but never needed to contact them
			Lack of guidelines, especially if network is suspected. There is a department lab technician, site ICT technicians and CLTD technicians!
Adequate preparation time for LMS activities	Yes	6	Since all my work is already in digital format, uploading on wiseup has become very easy
			But the implementation on the performance of the LMS that we are using is highly recommended as staff stop using LMS because of the poor

			performance
			Well, if you decide to integrate LMS into teaching you got to find time
	No	3	Well! I am too busy with my research work, normal classes and extra classes
			Due to work load being high not much time is given into developing a good LMS activity
	I do not use LMS	2	Nope, but most of the time I just upload notes and presentation slides. Recently I can't log into the system
			Not currently but have done in past. Once the time has been invested to set-up the course it is not onerous to add components. Initial "time investment" is quite high

LMS features used	Share material	9
	Use gradebook	2
	Use discussion forum	4
	Use monitoring and tracking	2
	Conduct assessments and surveys	6

LMS time spent on single subject	Above 5 hours per week	1
	2 - 3 hours a week	0
	1 - 2 hours a week	3
	Below 1 hour a week	3
	Do not use LMS	4

SECTION C

More staff will be using LMS in the next few years	Fully Agree	1
		1
		6
		1
	Do not agree at all	2

LMS integration can improve student performance	Fully Agree	1
		8
		1
		1
	Do not agree at all	0

Do you need more LMS integration training and support	Fully Agree	4
		2
		2
		0
	Do not agree at all	3

LMS future needs	Respondant 1	Elaborate	Making a provision for video face-to-face lecturing or interaction between the students and tutor would be good
	Respondant 2		I would like my students to be able to learn on their own using the tool and also from each other instead of relying solely on the lecturer
	Respondant 3		
	Respondant 4		It will create the ground for students to discover rather than be lecturing to
	Respondant 5		
	Respondant 6		Improved learner performance
	Respondant 7		To facilitate easy way of marking essay type of assignments and tests
	Respondant 8		I cannot really answer this one as I have not use the current LMS to its full potential so I do not know the full functionality of the current LMS
	Respondant 9		Student must be independent and also be able to manage themselves not relying on the lecturer. Problem solving and decision making. Planning for

			their courses
	Respondant 10		LMS can only be successful, if and only if students do get access to Internet. Their lab-access in after hours, Internet access in residences are vital. With these, I would like to see all academic staff using LMS to support T&L (a blended approach)
	Respondant 11		Good passrate; students to collaborate more; constructive discussion forums

Interview Summary

Blended Learning	Sheila	When you utilise all other avenues that are out there that can actually assist learning and teaching or enhance it [in class? 00:01:52] – inside class and outside class.
LMS understanding	Sheila	It's a system that actually helps us enhance teaching and learning for students, so both students and the lecturers, because of managing learning means that you don't have to manage it only in class
		You also have to manage outside by the students themselves and then once… whatever you gave them in class, then they have to… they try to take it out and try to [inaudible 00:02:37]. It's also that I actually was in track management, whatever.
		I think it's easy. If they're in… if they are done correctly, they would and [inaudible 00:03:03] of those kind of resources [between? 00:03:05] [inaudible 00:03:06] instruments because you… you can't say that you want students… I mean, material will be available on desktop, or even if they're going to be available online, for [inaudible 00:03:19] online, but yes, [inaudible 00:03:21]. You know that some of them don't even have internet at home or they come in and have… they don't even have a laptop…
		so I think what should be done is that we need to look at why is it relevant to them? What [inaudible 00:03:42] that they can afford it to [inaudible 00:03:44] but that is… students must have something. That is the actual [inaudible 00:03:49]…
		What is it that they have? Do you want them to buy it or do you want to use what we already have? [Inaudible 00:03:58] mobile phones, cell phones. So then you can start saying: "Okay, they have their… they have a nice blended whatever… what can I… how can I use that into… make it into what they have.
		Yes, I think… I think… I think it would because of… I've noticed that my students have even better, ja, mobile phones than me. I'm [very? 00:04:46]. I don't even have it. I don't even have a tablet. They have tablets, hey?
Preparedness to use LMS	Sheila	I mean, there are lecturers… do you know that there are lecturers who are still writing their exam papers… and many times we have to type it for them, even though the department or whoever gave them laptops, or even [their? 00:05:40] [inaudible 00:05:41]. Ja, [inaudible 00:05:42] but they will write it down and actually take the [inaudible 00:05:46] and give it to [exams? 00:05:48]. So I will not [just? 00:05:49] say everybody. In our community, the [inaudible 00:05:53] you definitely know because if I remember, in exams they used to say "IT's the only department that actually gives out… presents a typed question paper…

Blackboard training	Sheila	No. Not really. I never attended any training of… [the blackboard [inaudible 00:07:55], then the blackboard. I never attended any training.
		when it first rolled out, was that lecturers, they should have submitted classes that they think or… [they said? 00:08:10] we should submit classes that they think we should [inaudible 00:08:13] first be integrated into this, so the class that I taught, there was a… what is it… [it was not chosen? 00:08:20] and sort of like a pilot [inaudible 00:08:23] [immediate? 00:08:24] pilot. Forced to adopt LMS because of inheritted courses during academic year
		So there was never… even though you are inheriting this new subject, you are not inheriting the… the skills that they were given
		I had to do it myself, as an IT person, you know?
		How is it going to benefit my students and benefit me because I have to see the benefit of it and I have to sell those benefits to the students. So if I'm not convinced myself, and I mean I don't know how to use it, I'll not use it. I will stick to what I know.
Motivation for increase use and role out	Sheila	You should first have a buy-in.
		Buy-in of… show me how is this [inaudible 00:09:57] [going to benefit? 00:09:58]…
		and how is it going make my… my life, as a lecturer [inaudible 00:10:05] [facility change? 00:10:06] [inaudible 00:10:06]. How is it going to benefit my students and benefit me because I have to see the benefit of it and I have to sell those benefits to the students. So if I'm not convinced myself, and I mean I don't know how to use it, I'll not use it. I will stick to what I know.
		I know they do, but the thing is that [they're aware of it? 00:10:54]. [First then? 00:10:57] try to see… because you always see, in this… workshops, whatever, you always see [inaudible 00:11:04] [hear? 00:11:05] people talking about… [you know what? 00:11:06] [inaudible 00:11:06] about all these nice things that that blackboard can do. Oh, the network! [And next week? 00:11:12] the network has…
Barriers of LMS use	Sheila	Because of… what is it… we've got that [tendency? 00:11:17], we now know that, okay, if I [was happy to? 00:11:21] adopt this, [chances are? 00:11:23] if I'm going to go to [class? 00:11:24], [let's say? 00:11:25] I posted something on… I have network. I posted something online for them
		Then the next thing, I go to class and I say: "Go to blackboard". There's no network. [So that at the end of the day? 00:11:42]: "Ah, why don't I just print out these things for them anyway?"

		Well, [right? 00:11:57], you are told that you need to do this, but yet they are not supporting you… they need to make sure that the supports are there, [computers? 00:12:07] are working and also make sure that… what is it… if we get a… I mean, you've got management who keeps on telling you that they are… what's this… in roll-out [because it's new? 00:12:18]. We [tell them? 00:12:19] [that you need this much? 00:12:20] [students? 00:12:21].
		And then, of course, [you roll those student benefits? 00:12:22] – [no, increase the? 00:12:24] numbers, increase the numbers, increase the numbers.
		Then the numbers are increased. Then you tell them that: "Okay, but if you increase the numbers, we're not going to be needing resources [that are? 00:12:32]… Yes, increase the numbers. Give you those things. But when it comes to… when it comes to them not giving our money, it becomes a problem now. You see? And they end up having a small class, but yet students can't fit in that small class.
		So, I've got to know [employees? 00:35:18], [that they? 00:35:19] have different ways of resistance. Resistance does not mean: "No, I'm not going to use that only." It's: "Okay, [inaudible 00:35:26] [needs to use it? 00:35:26]. Okay." Then I go back to my office and I do my thing. Yes, I do my thing. [As long as I can work with? 00:35:34] [inaudible 00:35:35]…
		Basic education system does not fully prepare students for tertiary. The expectations of students is business as usual when in fact more effort it needed on their part - homework, research, knowledge acquisition…
Experience being taught using LMS	Sheila	Where you just had to go through… what is it… the assignment was there and the material was there. The only thing you had to engage the lecturer with… well, it depends on what he was presenting… was that your… if you were encountering any problems, then… or something does not gel right, then you ask her. It was a bit… what was it… it was nice because of, you can do things at your own pace.
		At your own pace and then… what is it… you don't… learning is not like… you know, sometimes you see like, things you don't understand [too well? 00:14:55] and then you feel like… ja, what is it… what am I trying to say… if you don't have… because sometimes they put… [at that time? 00:15:03] [inaudible 00:15:04] it's a workshop [inaudible 00:15:06] in a week's time…
Benefits	Sheila	This one's writing it down and [inaudible 00:18:15] and then the other one: ["I couldn't ask them."? 00:18:18]. So if you… if you have that kind of tool, then that means you can be anonymous. No-one has to know that it's you.
		Students no longer feel shy to ask questions due to anonimity

		without it being seen as… feeling intimidated or feeling stupid
		Because I think that's what most people are afraid of.
Creating a learning environment for LMS use	Sheila	I think so. I think if all other stakeholders and all other resources are helping them and also forcing them… We need to force them with [value? 00:24:15] on our side…
		I think they won't have a choice but to get on board, [because I think? 00:24:27] for them not to use it is that… we allow it actually, because of… we are not confident enough in saying that: "Yes, you should use it. Yes, I'm forcing you to use it."
		So I think by then if you are now forcing something, I say to them that: "You know what? I'm not going to be printing any notes for you", because I have to print those notes because of I know that the network is [always downso they're not going to get those notes.
		Improve computer lab access after class time
Suggestions to improving current roll-out strategy	Sheila	there any small things that you might think, if done properly, would also motivate use?
		If the network can be on. It needs to be up all the time
		Computer labs, if they can be maintained in such a way that they're… I mean, if your computer… you have to realise that the machine is not working… not working in terms of a crash or whatever, but in terms of the keyboard is not working…
		Allow student to use their own devices in class (laptops, tablets, smartphones)
		Improve support

Full Interview

INTERVIEWER: You've read through the consent form… You read through that initial…
INTERVIEWEE: [Inaudible 00:00:06]…
INTERVIEWER: Yes, as to what is the purpose of this research and so on and so forth. And you agree to participate?
INTERVIEWEE: Yes.
INTERVIEWER: Okay, so you can just sign there.
INTERVIEWEE: Okay. And this needs to be [inaudible 00:00:20], yes?
INTERVIEWER: Yes. So that we know that you signed.
INTERVIEWEE: [Inaudible 00:00:24] I've got it. So that people know. [Inaudible 00:00:34] there.
INTERVIEWER: No. [Inaudible 00:00:37].
INTERVIEWEE: Yes.
INTERVIEWER: Okay. So I've just got a few questions.
INTERVIEWEE: [Inaudible 00:00:43].
INTERVIEWER: Right.
INTERVIEWEE: I know [inaudible 00:00:44].
INTERVIEWER: And it's divided into sections, so there's a section for experiences and there's a section for expectations – just two sections. Only.
INTERVIEWEE: [Inaudible 00:00:55] [it's only? 00:00:56] expectations. [Only? 00:00:57].
INTERVIEWER: No, but I need to… have them recorded.
INTERVIEWEE: Okay.
INTERVIEWER: So that we have that on record. Right?
INTERVIEWEE: Yes.
INTERVIEWER: Alright. So just to repeat the process, is... you know that this research is about the roll-out of the [learner? inaudible 00:01:16] management system within the institution. Right? And so I want to just see why it is that some lecturers are utilising it and some not, and if they're utilising it, to what extent they're utilising that system and why.
INTERVIEWEE: Okay.
INTERVIEWER: Alright?
INTERVIEWEE: Yes.
INTERVIEWER: Okay. So, in your own words, do you know what blended learning is?
INTERVIEWEE: No, I don't.
INTERVIEWER: Yes.
INTERVIEWEE: Now when you utilise all other avenues that are out there that can actually assist learning and teaching or enhance it [in class? 00:01:52] – inside class and outside class.
INTERVIEWER: Yes, right. Okay. So, given that, then your definition of learner manager system was…
INTERVIEWEE: [Inaudible 00:02:04]…
INTERVIEWER: Last time.
INTERVIEWEE: No, God. I said it's… that it's a system that actually helps us enhance teaching and learning for students, so both students and the lecturers,

because of managing learning means that you don't have to manage it only in class.
INTERVIEWER: Yes.
INTERVIEWEE: You also have to manage outside by the students themselves and then once… whatever you gave them in class, then they have to… they try to take it out and try to [inaudible 00:02:37]. It's also that I actually was in track management, whatever.
INTERVIEWER: Okay. Alright. So that… So would you… would you think that the integration of this learning management system would assist in formalising a blended learning approach for students?
INTERVIEWEE: I think it's easy. If they're in… if they are done correctly, they would and [inaudible 00:03:03] of those kind of resources [between? 00:03:05] [inaudible 00:03:06] instruments because you… you can't say that you want students… I mean, material will be available on desktop, or even if they're going to be available online, for [inaudible 00:03:19] online, but yes, [inaudible 00:03:21]. You know that some of them don't even have internet at home or they come in and have… they don't even have a laptop…
INTERVIEWER: Yes.
INTERVIEWEE: …or any other way of accessing that material, so that's useless that way, so I think what should be done is that we need to look at why is it relevant to them? What [inaudible 00:03:42] that they can afford it to [inaudible 00:03:44] but that is… students must have something. That is the actual [inaudible 00:03:49]…
INTERVIEWER: Okay.
INTERVIEWEE: …on outside
INTERVIEWER: Right.
INTERVIEWEE: What is it that they have? Do you want them to buy it or do you want to use what we already have? [Inaudible 00:03:58] mobile phones, cell phones. So then you can start saying: "Okay, they have their… they have a nice blended whatever… what can I… how can I use that into… make it into what they have.
INTERVIEWER: Okay. Right. I see. So that means that [inaudible 00:04:19] for advantage of the learner management system is that it would have a good mobile platform that you can engage with.
INTERVIEWEE: [Inaudible 00:04:28] my, my, my, by lecturer, but now [by? 00:04:32] learner, yes.
INTERVIEWER: Yes. Yes. So you think that that would actually be an advantage.
INTERVIEWEE: Yes, I think… I think… I think it would because of… I've noticed that my students have even better, ja, mobile phones than me. I'm [very? 00:04:46]. I don't even have it. I don't even have a tablet. They have tablets, hey?
INTERVIEWER: Yes, [they're? 00:04:50] very advanced.
INTERVIEWEE: Yes.
INTERVIEWER: And so when it comes now to the staff, do you think that the staff members are, in terms of the profession of lecturing, prepared to integrate this system… the learning management system, in their teaching practice.
INTERVIEWEE: They, themselves?
INTERVIEWER: Ja.
INTERVIEWEE: I don't know. [Some are? 00:05:19] [inaudible 00:05:19] [saying? 00:05:20] [I was? 00:05:20] [inaudible 00:05:20], like others. I would not know whether they do have that because of… I mean, there are lecturers… do you know that there are lecturers who are still writing their exam papers…
INTERVIEWER: Great.

INTERVIEWEE: …and [including? 00:05:33] and many times we have to type it for them, even though the department or whoever gave them laptops, or even [their? 00:05:40] [inaudible 00:05:41]. Ja, [inaudible 00:05:42] but they will write it down and actually take the [inaudible 00:05:46] and give it to [exams? 00:05:48]. So I will not [just? 00:05:49] say everybody. In our community, the [inaudible 00:05:53] you definitely know because if I remember, in exams they used to say "IT's the only department that actually gives out… presents a typed question paper…
INTERVIEWER: Yes.
INTERVIEWEE: …which… Hey? Which have… [remember? 00:06:10] [inaudible 00:06:11] which used to be… was very grateful that I don't have to even [ask? 00:06:15] [inaudible 00:06:15]. I didn't know you… I complained about you guys, but one thing I like about you is that you submitted it late, but yet, when it's submitted I don't have to do any work at all because of you've already done it for me.
INTERVIEWER: Yes.
INTERVIEWEE: Aha. So, I will say IT is, but I don't know about the rest of… seeing that, you see, from that [base? 00:06:38] I [could have just given you? 00:06:38]… I will not say, safely… know that someone from [electrical works? inaudible 00:06:42] will like to use that particular system…
INTERVIEWER: Ah, so that means that you would probably say that there's already a literacy issue before…
INTERVIEWEE: That needs to be addressed first to check whether, after I've a completed a test… before we [produce? 00:07:03] it, are we competent enough to actually now say: "Give me my [inaudible 00:07:08]", and understand it. [Navigate? 00:07:11]… [inaudible 00:07:12] [says? 00:07:13] because you have to go in class and [inaudible 00:07:15] and show because [the? 00:07:16] [inaudible 00:07:16] you can't [fix? 00:07:07]… [they can't know it? 00:07:17]. [You have to tell them? 00:07:18] and [your plan? 00:07:20] to show someone [to do it? 00:07:21].
INTERVIEWER: [That's true? 00:07:23].
INTERVIEWEE: That's a problem.
INTERVIEWER: So it even interferes with the whole lesson process.
INTERVIEWEE: Yes, and establishing… what is it… confidence…
INTERVIEWER: Yes. So, tell me… did you ever attend the LMS…or any training?
INTERVIEWEE: [Computer? 00:07:44]?
INTERVIEWER: Like… [inaudible 00:07:46]… so you… did you do any?
INTERVIEWEE: No. Not really. I never attended any training of… [the blackboard [inaudible 00:07:55], then the blackboard. I never attended any training.
INTERVIEWER: Oh.
INTERVIEWEE: I remember what happened was, because of… remember when we first [had to? 00:08:01]… when it first rolled out, was that lecturers, they should have submitted classes that they think or… [they said? 00:08:10] we should submit classes that they think we should [inaudible 00:08:13] first be integrated into this, so the class that I taught, there was a… what is it… [it was not chosen? 00:08:20] and sort of like a pilot [inaudible 00:08:23] [immediate? 00:08:24] pilot.
INTERVIEWER: Right.
INTERVIEWEE: The class… I mean, the [inaudible 00:08:26] that I taught at that time was not a pilot.
INTERVIEWER: Yes.
INTERVIEWEE: So, the class that they chose, [hey? 00:08:33]… then those that they… the one that chose, hey, they went to this training, so those that were not…

because why would we…
INTERVIEWER: Exactly.
INTERVIEWEE: Yes. Then it happened that the… for some… for some reason that happened… he… [and I might have to take? 00:08:50]…
INTERVIEWER: …a course. Yes.
INTERVIEWEE: …take a course.
INTERVIEWER: Yes, yes.
INTERVIEWEE: [Inaudible 00:08:53] and [if I like the course? 00:08:55] then someone [inaudible 00:08:56] [shared? 00:08:57].
INTERVIEWER: Ja.
INTERVIEWEE: Someone saying: "Okay, it's on… [not this thing? 00:09:00] [on the? 00:09:00] [inaudible 00:09:00] but I know it's on blackboard.
INTERVIEWER: Yes.
INTERVIEWEE: You see?
INTERVIEWER: Yes.
INTERVIEWEE: And [then? 00:09:03] [inaudible 00:09:04], oh my God!
INTERVIEWER: So there was never… even though you are inheriting this new subject, you are not inheriting the… the skills that they were given [inaudible 00:09:15]…
INTERVIEWEE: Yes.
INTERVIEWER: [inaudible 00:09:16]…
INTERVIEWEE: So I had to… I had to… if I run into problems [inaudible 00:09:20] because we have [TV? 00:09:21] [attached to the? 00:09:21] [inaudible 00:09:22].
INTERVIEWER: Yes.
INTERVIEWEE: Oh, but how do I [do? 00:09:24] this? And then that's some of the things. I had to do it myself, as an IT person, you know?
INTERVIEWER: Yes.
INTERVIEWEE: Find… you know… find my way, [inaudible 00:09:33].
INTERVIEWER: Hey. Okay. So that means that… so, if there was more support for this, do you think that there would be a greater motivation?
INTERVIEWEE: [Testing? 00:09:48]. [Testing? 00:09:49]. [Inaudible 00:09:50]. You should first have a buy-in.
INTERVIEWER: Right.
INTERVIEWEE: Yes.
INTERVIEWER: Yes.
INTERVIEWEE: Buy-in of… show me how is this [inaudible 00:09:57] [going to benefit? 00:09:58]…
INTERVIEWER: Yes.
INTERVIEWEE: …and how is it going make my… my life, as a lecturer [inaudible 00:10:05] [facility change? 00:10:06] [inaudible 00:10:06]. How is it going to benefit my students and benefit me because I have to see the benefit of it and I have to sell those benefits to the students. So if I'm not convinced myself, and I mean I don't know how to use it, I'll not use it. I will stick to what I know. I don't think [inaudible 00:10:23] which was done poorly, which then they [inaudible 00:10:29], you know, [you should get through this? 00:10:30].
INTERVIEWER: Yes.
INTERVIEWER: [Inaudible 00:10:35]… So you think that it was more of an institutional than a lecturer-motivated approach?
INTERVIEWEE: Yes.

INTERVIEWER: Okay. Therefore the need for this buy-in from staff members to actually…
INTERVIEWEE: Yes. Because of… they want us to use it in class.
INTERVIEWER: Yes.
INTERVIEWEE: I know they do, but the thing is that [they're aware of it? 00:10:54]. [First then? 00:10:57] try to see… because you always see, in this… workshops, whatever, you always see [inaudible 00:11:04] [hear? 00:11:05] people talking about… [you know what? 00:11:06] [inaudible 00:11:06] about all these nice things that that blackboard can do. Oh, the network! [And next week? 00:11:12] the network has…
INTERVIEWER: Yes.
INTERVIEWEE: You see?
INTERVIEWER: Yes.
INTERVIEWEE: Because of… what is it… we've got that [tendency? 00:11:17], we now know that, okay, if I [was happy to? 00:11:21] adopt this, [chances are? 00:11:23] if I'm going to go to [class? 00:11:24], [let's say? 00:11:25] I posted something on… I have network. I posted something online for them.
INTERVIEWER: Yes.
INTERVIEWEE: Then the next thing, I go to class and I say: "Go to blackboard".
INTERVIEWER: Yes.
INTERVIEWEE: There's no network.
INTERVIEWER: Right. So you want a lesson plan and [gone out of? 00:11:39]…
INTERVIEWEE: You see?
INTERVIEWER: Yes.
INTERVIEWEE: Then I have to come up with plan B.
INTERVIEWER: Yes.
INTERVIEWEE: [So that at the end of the day? 00:11:42]: "Ah, why don't I just print out these things for them anyway?"
INTERVIEWER: Yes.
INTERVIEWEE: You see?
INTERVIEWER: Yes.
INTERVIEWEE: That's another… what is it… attitude.
INTERVIEWER: Yes.
INTERVIEWEE: [One-ended? 00:11:52] [inaudible 00:11:53] because you are pushed in that direction.
INTERVIEWER: Yes.
INTERVIEWEE: Well, [right? 00:11:57], you are told that you need to do this, but yet they are not supporting you…
INTERVIEWER: Yes.
INTERVIEWEE: …in making sure that… they need to make sure that the supports are there, [computers? 00:12:07] are working and also make sure that… what is it… if we get a… I mean, you've got management who keeps on telling you that they are… what's this… in roll-out [because it's new? 00:12:18]. We [tell them? 00:12:19] [that you need this much? 00:12:20] [students? 00:12:21].
INTERVIEWER: Okay.
INTERVIEWEE: And then, of course, [you roll those student benefits? 00:12:22] – [no, increase the? 00:12:24] numbers, increase the numbers, increase the numbers.
INTERVIEWER: Yes.
INTERVIEWEE: Then the numbers are increased. Then you tell them that: "Okay,

but if you increase the numbers, we're not going to be needing resources [that are? 00:12:32]… Yes, increase the numbers. Give you those things. But when it comes to… when it comes to them not giving our money, it becomes a problem now. You see? And they end up [having? 00:12:40] a small class, but yet students can't [feed? 00:12:43] in that small class.
INTERVIEWER: Right.
INTERVIEWEE: You see? Then they end up having students sitting ten per computer.
INTERVIEWER: Yes.
INTERVIEWEE: [Then it's supposed? 00:12:09] to learn typing. [You are not? 00:12:51] [inaudible 00:12:51] supporting.
INTERVIEWER: Yes.
INTERVIEWEE: And other supporting because of… they're not… no longer interested. [They have lost? 00:12:56] because of… if you are no longer engaging all of the [help? 00:13:00] you are only engaging one student who is happy, and those that are sitting close with… so the ones that are far, of course they're going to get bored.
INTERVIEWER: Yes.
INTERVIEWEE: I mean, if it's a… you know, student… I mean, I would be [inaudible 00:13:13]… I will be interested in what you are saying if I'm doing it myself.
INTERVIEWER: Right.
INTERVIEWEE: By myself.
INTERVIEWER: Yes.
INTERVIEWEE: And I'm seeing you say this and I'm doing it here. You say and I see the [inaudible 00:13:22] problem. I raise my hand if there's a problem. You see?
INTERVIEWER: Yes.
INTERVIEWEE: But if one person is doing it in a group, then…
INTERVIEWER: No way.
INTERVIEWEE: No way.
INTERVIEWER: Okay, so the effectiveness is just lost in that whole process.
INTERVIEWEE: Yes.
INTERVIEWER: But, now tell me, you were talking about motivation earlier on, right?
INTERVIEWEE: Yes.
INTERVIEWER: Did you ever, ever, ever… were you ever taught a course or a subject or a workshop where you would have this engagement with a learner management system?
INTERVIEWEE: Where I used it?
INTERVIEWER: Yes, where you were on the other side of the classroom
INTERVIEWEE: Oh… I think I… I did.
INTERVIEWER: Yes. What did you… what did you think?
INTERVIEWEE: But I… what is it… when I went for this… remember that IO… IOM?
INTERVIEWER: Yes.
INTERVIEWEE: Where everything was online.
INTERVIEWER: Yes.
INTERVIEWEE: Where you just had to go through… what is it… the assignment was there and the material was there. The only thing you had to engage the lecturer

with… well, it depends on what he was presenting… was that your… if you were encountering any problems, then… or something does not gel right, then you ask her. It was a bit… what was it… it was nice because of, you can do things at your own pace.
INTERVIEWER: Right.
INTERVIEWEE: At your own pace and then… what is it… you don't… learning is not like… you know, sometimes you see like, things you don't understand [too well? 00:14:55] and then you feel like… ja, what is it… what am I trying to say… if you don't have… because sometimes they put… [at that time? 00:15:03] [inaudible 00:15:04] it's a workshop [inaudible 00:15:06] in a week's time…
INTERVIEWER: Yes.
INTERVIEWEE: So which means that the… what is it… if, let's say, he went ov… she went over something…
INTERVIEWER: Yes.
INTERVIEWEE: …and she moved on [inaudible 00:15:15], but I did not understand…
INTERVIEWER: Yes.
INTERVIEWEE: I've got a chance to go back…
INTERVIEWER: Right.
INTERVIEWEE: …myself…
INTERVIEWER: Yes.
INTERVIEWEE: …and do those things myself and then tomorrow morning I will come and… and on top of that, she will give us the material and we have laptops that... what is it… have laptops [inaudible 00:15:31] laptops, so what I will… what we'll do is that me and Paul, at night, I'll ask Paul what's this and blah, blah, blah…
INTERVIEWER: Yes.
INTERVIEWEE: So it gave me time to actually do the thing by myself, anytime in anywhere, anything…
INTERVIEWER: Right.
INTERVIEWEE: You see?
INTERVIEWER: Okay.
INTERVIEWEE: So it's… I mean, I know there are students that are afraid to come to my office.
INTERVIEWER: Yes.
INTERVIEWEE: They're telling me that [inaudible 00:15:58]… what is it… are [meeting? 00:16:00] with their team.
INTERVIEWER: Right.
INTERVIEWEE: Yet I make jokes with them in class.
INTERVIEWER: Yes.
INTERVIEWEE: [So I'm like? 00:16:05], [if ever I was? 00:16:06]… I was like, I mean, why will I be [inaudible 00:16:09] them if I joke with you? You see, a person [who is? 00:16:11] [inaudible 00:16:12] me is a person who comes to you [as a? 00:16:14] [inaudible 00:16:14].
INTERVIEWER: Yes.
INTERVIEWEE: That [they should see that? 00:16:15] as intimidating. And on top of that, before you make an assumption about a person, you engage them.
INTERVIEWER: That's right.
INTERVIEWEE: You engage them. Then after that, then you can say the person is intimidating.

INTERVIEWER: Yes.
INTERVIEWEE: Because of I went to them and the next thing they were questioning me. They were [drilling? 00:16:31] me like a… Then they can say that. Because if you haven't engaged anyone, but yet you have nothing… we have an opinion. You need help…
INTERVIEWER: …on a lot…
INTERVIEWEE: …on a whole lot of things that you could have been given. You see? So, that is very… it was helpful.
INTERVIEWER: Okay.
INTERVIEWEE: It was helpful, and also I got to… because of if I understood things, I got to do other things.
INTERVIEWER: Right.
INTERVIEWEE: You see?
INTERVIEWER: Yes.
INTERVIEWEE: Before it's even done in class. And also I will know what the… what's going to be done tomorrow…
INTERVIEWER: Right.
INTERVIEWEE: …and I can look at the material, read the material, try to do the homework myself.
INTERVIEWER: Yes. [Inaudible 00:17:10[[right there? 00:17:11]. So that means that, if you look at it, then you see that there's a good way of implementing. Right? So would you then say that the… if that was replicated here, it would give you more motive to use it?
INTERVIEWEE: Yes, it would. It would. I would definitely… would like to use that type of thing, …
INTERVIEWER: Yes.
INTERVIEWEE: …especially for programming…
INTERVIEWER: Yes.
INTERVIEWEE: …the… what is it… the student can go and actually… and I can also load programmes onto… what is it… onto the server, whatever, so they can easily [accept? 00:17:58] those, and if there are problems, then they don't have to wait for tomorrow morning to ask me [inaudible 00:18:04] if they see that I'm there, then they can ask… so they can ask each other.
INTERVIEWER: Yes.
INTERVIEWEE: Because of… most of them will say: "No, there's [inaudible 00:18:10]…"
INTERVIEWER: Right.
INTERVIEWEE: This one's writing it down and [inaudible 00:18:15] and then the other one: ["I couldn't ask them."? 00:18:18]. So if you… if you have that kind of tool, then that means you can be anonymous. No-one has to know that it's you.
INTERVIEWER: Yes.
INTERVIEWEE But yet your question can be answered…
INTERVIEWER: Right.
INTERVIEWEE: …without it being seen as… feeling intimidated or feeling stupid.
INTERVIEWER: Yes.
INTERVIEWEE: Because I think that's what most people are afraid of.
INTERVIEWER: Ja. No…
INTERVIEWEE: Someone thinking that I'm stupid.
INTERVIEWER: Yes, and then there's no learning [when it takes place? 00:18:46],

then in the back of your mind you're saying: Hey, am I saying something sensible? Is this the right question to ask?
INTERVIEWEE: Yes. Because it's happening. I mean, if my colleagues are [heard? 00:18:57], they won't even know there's a… this answer.
INTERVIEWER: Yes.
INTERVIEWEE: So… and [I'm behind? 00:19:01] [inaudible 00:19:02], you see?
INTERVIEWER: Yes.
INTERVIEWEE: So [inaudible 00:19:05] if you don't know me. Why would you be stupid if you don't know [it? 00:19:08].
INTERVIEWER: Yes, it's true. It's true. So you also made mention of the fact that there are infrastructure-based problems that influence…
INTERVIEWEE: …the adoption of this [or even? 00:19:21] the buy-in from anybody else.
INTERVIEWER: Yes.
INTERVIEWEE: Yes, yes, yes, yes. I mean, really, [they'll get value-add? 00:19:27]…
INTERVIEWER: Ja.
INTERVIEWEE: …[if they can use? 00:19:29] [inaudible 00:19:29]. [There's one in? 00:19:31] [inaudible 00:19: 32]. There's no [network? 00:19:34]… I mean, there's no network point.
INTERVIEWER: Yes.
INTERVIEWEE: I think our computers are not even connected to the network.
INTERVIEWER: Yes.
INTERVIEWEE: Because of they've got that problem of you have to move the desks. Everything [inaudible 00:19:42], whatever. Take it back as it was.
INTERVIEWER: Right.
INTERVIEWEE: Then of course people to get [inaudible 00:19:49].
INTERVIEWER: Yes.
INTERVIEWEE: It's one of… It takes about forty, but it's… [two computers? 00:19:54] are working here.
INTERVIEWER: Yes.
INTERVIEWEE: And then of course if you buy things like this [matter? 00:20:02], and now they are using inferior products now because of… we get new… new… what is it… new keyboards and it's no longer working, and it's no longer working…
INTERVIEWER: Right.
INTERVIEWEE: [Hey? 00:20:14], but it's no longer working. Mouse is no longer working, so computer is working, but other peripherals is no longer working.
INTERVIEWER: Not working.
INTERVIEWEE: Yes.
INTERVIEWER: Yes.
INTERVIEWEE: Oh, [airtime? 00:20:26]. It's a whole lot of [inaudible 00:20:32], so it's from top to bottom.
INTERVIEWER: Yes.
INTERVIEWEE: Especially from top, because I don't think they see the problem. I don't think they see it as such a huge problem that hinders learning.
INTERVIEWER: Yes.
INTERVIEWEE: They say, like: "Just do with what we have".
INTERVIEWER: Right.
INTERVIEWEE: Yes, and then they will see themselves [inaudible 00:20:51].

INTERVIEWER: Correct.
INTERVIEWEE: [Inaudible 00:20:51].
INTERVIEWER: Yes.
INTERVIEWEE: They won't see it as a [relevant? 00:20:54]. The product that they get out at the end… I mean, how do we now say that our students are competent enough – even at the same level as…
INTERVIEWER: …any other…
INTERVIEWEE: …community, or any other… Let's not (say) community. Let's say [what? 00:21:14] [inaudible 00:21:15]…
INTERVIEWER: Yes.
INTERVIEWEE: …and Cape Town. [Really? 00:21:18], can we seriously say that they are, if we know for sure… Because the [normal IT course? 00:21:25] I went for…
INTERVIEWER: Yes.
INTERVIEWEE: …was in Cape Town.
INTERVIEWER: Right.
INTERVIEWEE: The network… my dear God!
INTERVIEWER: [Worlds different? 00:21:31].
INTERVIEWEE: Never disappointing. I am telling you.
INTERVIEWER: Oh no.
INTERVIEWEE: You see, now, can we…can we say that our [same? 00:21:44] student can now go and compete with those stud… students who come from that environment where they know for sure that they have… what is it… a lecturer [who said? 00:21:55]: "Oh ja, when you run a [Java? 00:21:58] programme, it's supposed to…" They've seen it.
INTERVIEWER: Right
INTERVIEWEE: You see. What it's supposed… not that they have seen it. They have done it themselves. You see? So [you can know? 00:22:08] you're supposed to do it like that, but… and I'm not going to know. No, no, no, I have done it. I've experienced it and I've done it and blah, blah, blah. So you see, it's that we are disadvantaging them…
INTERVIEWER: Yes.
INTERVIEWEE: …but yet you want to get rid of this disadvantage.
INTERVIEWER: Labelling?
INTERVIEWEE: Yes.
INTERVIEWER: Yes. Then, do you think… or do you know of any structural… either support mechanisms or even policies that force or apply or request that you use these learner management systems?
INTERVIEWEE: Can I? Can I? I don't know.
INTERVIEWER: Yes.
INTERVIEWEE: I don't know, [because? 00:22:54] I… I told you on Monday? 00:22:55] because they use their product and you know how they are helping other… other departments, I think. [Inaudible 00:23:00]. [Inaudible 00:23:03]. I'm never going to give you [money? 00:23:09] if you are not going to use our products. So departments are end up being called [Inaudible 00:23:15].
INTERVIEWER: Alright. [Inaudible 00:23:17]…
INTERVIEWEE: They do so because of… they want money from [KPA? 00:23:21]. I've never seen such a policy. I've never heard of such a policy.
INTERVIEWER: Yes.

INTERVIEWEE: [And then they get through it? 00:23:26].
INTERVIEWER: Yes. Okay. Cool. Alright. And the students – do you think that the students are more technically…
INTERVIEWEE: …challenged.
INTERVIEWER: Not really, because you're saying that the type of devices that they have… they've got these smart phones and all these kind of… tablets and stuff like that, right?
INTERVIEWEE: Yes.
INTERVIEWER: But when it comes to engaging within the learning sphere, do you think that they can easily adapt to that?
INTERVIEWEE: I think so. I think so. I think if all other stakeholders and all other resources are helping them and also forcing them… We need to force them with [value? 00:24:15] on our side…
INTERVIEWER: Yes.
INTERVIEWEE: …because of… [they need it now? 00:24:17]… everything is put in place and they all fit like a glove.
INTERVIEWER: Yes.
INTERVIEWEE: I think they won't have a choice but to get on board, [because I think? 00:24:27] for them not to use it is that… we allow it actually, because of… we are not confident enough in saying that: "Yes, you should use it. Yes, I'm forcing you to use it."
INTERVIEWER: Yes.
INTERVIEWEE: It's just they… what is it… they tend to manipulate and you are manipulated [also? 00:24:43] because of… [you know? 00:24:45], [so can you see 00:24:46]?
INTERVIEWER: Yes.
INTERVIEWEE: So I think by then if you are now forcing something, I say to them that: "You know what? I'm not going to be printing any notes for you", because I have to print those notes because of I know that the network is always down so they're not going to get those notes.
INTERVIEWER: Yes.
INTERVIEWEE: So I'm… I have a choice of printing them. So in [inaudible 00:25:02] they tend to say: "Ag, what's the point of me going and downloading them [on, on, on? 00:25:09], [what is it? 00:25:09], …
INTERVIEWER: [Inaudible 00:25:10]…
INTERVIEWEE: [On? 00:25:10] …[what is it? 00:25:11]… [Whatsapp? 00:25:12]…
INTERVIEWER: [Whatsapp? 00:25:12], yes.
INTERVIEWEE: Yes, what's the point, because [if I know? 00:25:14] [it's going to be there? 00:25:14], I know and I told her that network is not working.
INTERVIEWER: Yes.
INTERVIEWEE: You see? [Unless? 00:25:18] [I close? 00:25:18] all the time.
INTERVIEWER: Yes.
INTERVIEWEE: You see? That's another thing - [that nothing is valued? 00:25:21].
INTERVIEWER: Right, yes.
INTERVIEWEE: Because [it's selective that we also? 00:25:24] [inaudible 00:25:24] there's a schedule. They need to open at certain times – when class starts, when class ends, we all have to leave.
INTERVIEWER: Right.

INTERVIEWEE: You see?
INTERVIEWER: Yes.
INTERVIEWEE: [Inaudible 00:25:34]… You see? All the learners' cell phones, we have to respect. Sometimes also, ooh, waah, a lot has [to happen? 00:25:45].
INTERVIEWER: [A lot has to happen? 00:25:45], yes.
INTERVIEWEE: The mind-sets have to be changed. Attitudes have to be changed.
INTERVIEWER: Ja.
INTERVIEWEE: The softwares have to be updated.
INTERVIEWER: Yes.
INTERVIEWEE: Support has to be earned.
INTERVIEWER: Yes.
INTERVIEWEE: Whoa!
INTERVIEWER: Is it?
INTERVIEWEE: Yes. Buy-in has to be earned. You know?
INTERVIEWER: Yes. Yes. Yes. So that's where we going to now. This section of expectations. [Inaudible 00:26:13].
INTERVIEWEE: [Inaudible 00:26:14]…
INTERVIEWER: No. We… we… we're almost there. Almost there. So, you already… You've just really answered a question actually, because I was going to ask the question to say: "What do you want your department or [CLTD? 00:26:32] or the university to do with respect to improving this roll-out of learning management systems. So, [you gave? 00:26:41] that list. Yeah. That all of those things actually, if met, would motivate, not only [interest? 00:26:49] of staff members, but also the students to utilise that system.
INTERVIEWEE: Yes.
INTERVIEWER: It… in [inaudible 00:26:58], are there any small things that you might think, if done properly, would also motivate use?
INTERVIEWEE: More [things? 00:27:10]?
INTERVIEWER: Ja.
INTERVIEWEE: Little things?
INTERVIEWER: Ja.
INTERVIEWEE: [Inaudible 00:27:14] there's nothing. There's no little thing that I can think of. If the network can be on. It needs to be up all the time.
INTERVIEWER: Is it?
INTERVIEWEE: I think that [can have? 00:27:25]… The [inaudible 00:27:26] that we have, you see, I think… what is it… If they can be maintained in such a way that they're… I mean, if your computer… you have to realise that the machine is not working… not working in terms of a crash or whatever, but in terms of the keyboard is not working…
INTERVIEWER: Yes.
INTERVIEWEE: …whatever, the mouse is not working, I mean, I wish… I wish… I wish that, I mean… what's the thing… [ITC? 00:27:55] could have like spare… spare keyboards just sitting around… just spare keyboards that are sitting around where, you know, we buy it in bulk – spare keyboards that… if you say that then they will come and… you know, instead of you having to wait for [a meeting? 00:28:09]… for the department meeting and call the…
INTERVIEWER: [Skills? 00:28:14] [inaudible 00:28:15]…
INTERVIEWEE: Yes. And then… but nothing [gets? 00:28:17] to be done anyway because of no-one [recommended them? 00:28:20] and [inaudible 00:28:21] do

anything about…
INTERVIEWER: Yes.
INTERVIEWEE: …anything and [they manage anyway? 00:28:24].
INTERVIEWER: [Definitely? 00:28:24].
INTERVIEWEE: So, little things like those…
INTERVIEWER: Yeah.
INTERVIEWEE: …I think they can go a long way.
INTERVIEWER: Okay.
INTERVIEWEE: In… for the current system, you see?
INTERVIEWER: Yes.
INTERVIEWEE: So… because it's very frustrating when you get a machine… today it's not working. We [tell the? 00:28:41] [inaudible 00:28:42].
INTERVIEWER: Yeah.
INTERVIEWEE: [And then we have? 00:28:45]… [no idea? 00:28:45]. What do you expect me to do about it? You see? [It's that they really? 00:28:51]… you… it just… you just lodge a [that thing? 00:28:54] just for the sake of doing it.
INTERVIEWER: Yes.
INTERVIEWEE: But otherwise you just know yourself that that [might be? 00:28:59] even the end of it until we get a whatever part…
INTERVIEWER: Right.
INTERVIEWEE: …that needs to be fixed on what needs to be taken in as a new part, but otherwise that's it, [but then you have? 00:29:11] to look for another computer.
INTERVIEWER: There's always a problem or a challenge, hey?
INTERVIEWEE: And that's why now I've realised that most of my students have laptops to… which I can't… you see, and I can't say no, they can't work because [one of the meetings? 00:29:30] they should stop students from using laptops.
INTERVIEWER: Yes.
INTERVIEWEE: I think I did say that in the meeting, but I can't say to my students: "Stop using laptops".
INTERVIEWER: Right.
INTERVIEWEE: I will say: "Stop using laptops", if you give me working computers.
INTERVIEWER: Right.
INTERVIEWEE: So if I say… I mean, why would I say: "Stop using", when that student is sitting without a computer...
INTERVIEWER: Yes.
INTERVIEWEE: …while he has a laptop?
INTERVIEWER: Yes.
INTERVIEWEE: [When is that back? 00:29:54]?
INTERVIEWER: Yeah.
INTERVIEWEE: I will tell them: "Take it out and use it – especially letting… don't need networking.
INTERVIEWER: Yes.
INTERVIEWEE: We don't need networking.
INTERVIEWER: Yes.
INTERVIEWEE: So why not?
INTERVIEWER: Right.
INTERVIEWEE: If I want a student to use Word or I want a student to use Excel and they do have Word and they do have Excel…

INTERVIEWER: Yes.
INTERVIEWEE: …so I will not stop… So most of my students have… what is it… some… most of them have laptops, but they've already… I told them about Java being free. They can go and download [inaudible 00:30:18]… when they download it, they [also? 00:30:19]…
INTERVIEWER: Okay.
INTERVIEWEE: And then after that, [what? 00:30:21] [inaudible 00:30:22]… They come to class with their laptops now during [TP1? 00:30:25]…
INTERVIEWER: Yes.
INTERVIEWEE: …and then those that don't have laptops, they're the ones who use the…
INTERVIEWER: [Inaudible 00:30:29].
INTERVIEWEE: …the desktops that are working.
INTERVIEWER: Yes.
INTERVIEWEE: Then they will just…
INTERVIEWER: Yes. Okay. Yeah. I see. Alright. No, cool. Okay. So, those are my questions.
INTERVIEWEE: Wow, [inaudible 00:30:42].
INTERVIEWER: You see?
INTERVIEWEE: Aah.
INTERVIEWER: Not so bad.
INTERVIEWEE: Not so bad.
INTERVIEWER: Alright. Okay, so, no, thanks for this, but at least I've got an insight, which is a good start. Don't worry. There won't be any follow-ups.
INTERVIEWEE: Okay. [Inaudible 00:30:57] [how will it be? 00:30:57] when [inaudible 00:30:58]…
INTERVIEWER: Yes.
INTERVIEWEE: [I wonder how it will be? 00:31:00]… [what is it? 00:31:02]… management now coming in…
INTERVIEWER: Yes.
INTERVIEWEE: …and saying now: "Okay, now we have placed the… those things that we talked about now."
INTERVIEWER: No.
INTERVIEWEE: [Inaudible 00:31:11] done an agenda. [Inaudible 00:31:14].
INTERVIEWER: [Inaudible 00:31:14].
INTERVIEWEE: [The committee now? 00:31:15]. Can [they? 00:31:16]. No, I'm not reading [Wise Up? 00:31:17].
INTERVIEWER: Yes?
INTERVIEWEE: You know why?
INTERVIEWER: No.
INTERVIEWEE: I went to [Wise Up? 00:31:20]…
INTERVIEWER: Yes.
INTERVIEWEE: …and logged in…
INTERVIEWER: Yes.
INTERVIEWEE: [Inaudible 00:31:24] is not recognised.
INTERVIEWER: Oh.
INTERVIEWEE: [Apology? 00:31:28]. Every year I am supposed to go downstairs and have them approve my things and I said to…: "[Inaudible 00:31:36]". Why would I have to do that if I'm… if I'm… if I'm a member or if you have already put

my stuff on, I should be there from now on until I no longer be part of the…
INTERVIEWER: Right.
INTERVIEWEE: You see?
INTERVIEWER: Yes.
INTERVIEWEE: So this thing of me having to have to come to you every day…
INTERVIEWER: Yes.
INTERVIEWEE: …it's too much.
INTERVIEWER: Yes.
INTERVIEWEE: It… I mean, that would be students, but not me.
INTERVIEWER: Yes.
INTERVIEWEE: [Maybe? 00:32:00] that's how it's set up, it has to be? 00:32:01]…
INTERVIEWER: Alright, [blaming that on? 00:32:10]… On all fronts there need to be some changes.
INTERVIEWEE: Yes.
INTERVIEWER: Yes.
INTERVIEWEE: [I mean? 00:32:15] [and it has to be done? 00:32:15]. How can you set it up like that, that the lecturer has to be treated like a student?
INTERVIEWER: Yes.
INTERVIEWEE: Because of… I know, okay, yes, you can say to me that my stuff has changed…
INTERVIEWER: Yes.
INTERVIEWEE: …but I'm still a [WF? 00:32:28] [student? 00:32:28] or a… can't you say that [there was a? 00:32:30]… I can now… if my [class? 00:32:31] has changed, I'm no longer taking those subjects…
INTERVIEWER: Yes.
INTERVIEWEE: …yes, then I can… then I can come to you and say: "[Add? 00:32:37] these other subjects on…
INTERVIEWER: Right.
INTERVIEWEE: …but not add me again now.
INTERVIEWER: Aha. Yes, onto the system.
INTERVIEWEE: Yes. I do not say add me again onto the system now so that you can recognise me.
INTERVIEWER: Yes. [Inaudible 00:32:48].
INTERVIEWEE: Hey?
INTERVIEWER: It's very strange.
INTERVIEWEE: Very!
INTERVIEWER: Yes.
INTERVIEWEE: Because I remember, Paul asked me, like: "Can you log on onto [Wise Up? 00:32:55]?" I said: "No."
INTERVIEWER: Yes.
INTERVIEWEE: And then they tried… and I tried it on my [cellular account? 00:32:58].
INTERVIEWER: Yes.

INTERVIEWEE: [Inaudible 00:32:59]. Aah. Because I thought… I mean, if you are… if you are there, …

INTERVIEWER: Yes.

INTERVIEWEE: …they're supposed to be there.

INTERVIEWER: Yes, and then you just have to just log in, update whatever you want…

INTERVIEWEE: Yes, and then… what's it… all I have to do if I… if I… because I didn't have administrative, but I…

INTERVIEWER: Yes.

INTERVIEWEE: Then, if I want to change subject…

INTERVIEWER: Yes.

INTERVIEWEE: …then… or add subjects…

INTERVIEWER: Yes.

INTERVIEWEE: ...go to him and he will have… [since he? 00:33:29] has that message right then, add subject that [inaudible 00:33:32] [I was advised? 00:33:34]. Ah. [That is a? 00:33:38] [inaudible 00:33:38]. What I'm trying to say was, uhm, copy and pasting things.

INTERVIEWER: Yes.

INTERVIEWEE: But you don't know where they're coming from…

INTERVIEWER: Yes.

INTERVIEWEE: …[they're coming from? 00:33:45]...

INTERVIEWER: Yes.

INTERVIEWEE: …and not to customise it to [our needs? 00:33:47]…

INTERVIEWER: Yes.

INTERVIEWEE: …because of… if they did this, if they've got a buy-in from the [inaudible 00:33:54]…

INTERVIEWER: Yes.

INTERVIEWEE: …they would have then found out what is it that you actually want the system to do for [us? 00:33:59].

INTERVIEWER: Right.

INTERVIEWEE: Yes.

INTERVIEWER: Yes..

INTERVIEWEE: Then we will have [felt? 00:34:02]… we would have felt that we actually participated…

INTERVIEWER: Yes.

INTERVIEWEE: We would tell you [inaudible 00:34:06].

INTERVIEWER: Yes.

INTERVIEWEE: [We were just told? 00:34:11]…

INTERVIEWER: Yes, [very gently? 00:34:12].

INTERVIEWEE: …the [OCD? 00:34:12] has come out, [it's a? 00:34:14] blackboard. [If they can use it? 00:34:16]. You see? You see? Sometimes when I do this, like, when I do this… what is it… like MBA…

INTERVIEWER: Yes.

INTERVIEWEE: …we talk about… especially this one of B degree Commerce.

INTERVIEWER: Yes.

INTERVIEWEE: Then I will… you are considering… is it… it's that thing of saying we should get buy-in from… from your… the reason why you should get buy-in from your… from people who are working for you before you start… before you start looking at [the message? 00:34:51]. But anyhow, [well, I've? 00:34:52]… I never got to give buy-in to this [Wise Up? 00:34:55]. I was just told…

INTERVIEWER: Oh, there it is.

INTERVIEWEE: Yeah, but since I know it, I just adapt to change and I ended up using it. So… I get others… I get… You know, sometimes they [download? 00:35:11] this thing but are not using it. Instead they get into the… back to the… to what they're used to.

INTERVIEWER: Yes.

INTERVIEWEE: So, I've got to know [employees? 00:35:18], [that they? 00:35:19] have different ways of resistance. Resistance does not mean: "No, I'm not going to use that only." It's: "Okay, [inaudible 00:35:26] [needs to use it? 00:35:26]. Okay." Then I go back to my office and I do my thing. Yes, I do my thing. [As long as I can work with? 00:35:34] [inaudible 00:35:35]…

INTERVIEWER: Yes.

INTERVIEWEE: That's the most important point.

INTERVIEWER: Yes.

INTERVIEWEE: As long as your work is done. How it's done is not your problem. Because at the end of the day you want people to have classes. I… [Can? 00:35:47] I have a class? [Can? 00:35:48] I have a class? You know?

INTERVIEWER: Yes.

INTERVIEWEE: So what do you want?

INTERVIEWER: Yes.

INTERVIEWEE: You're already telling me that I manage my [own class? 00:35:53]. [Inaudible 00:35:53] like I'm a manager. So why do you want to come and micro-manage me now? But that's the problem. I think that… I think [maybe? 00:36:02] [inaudible 00:36:02] people get this… get to be managers, they tend to forget all of those…

INTERVIEWER: …things that happened in the classroom…

INTERVIEWEE: Yes. Yes.

INTERVIEWER: …and…

INTERVIEWEE: …that I need to get their buy-in [inaudible 00:36:13], but I also think the problem is [CLTD? 00:36:17].

INTERVIEWER: Yes.

INTERVIEWEE: [CLTD? 00:36:19]… and also [CLTD? 00:36:22] has… I mean, an attitude…

INTERVIEWER: Correct.

INTERVIEWEE: [Inaudible 00:36:24] people [already have? 00:36:26] it. They have an attitude about any other department, like it's [inaudible 00:36:30] the only [WSU? 00:36:31] in terms of: "I get more." The moneys that they pay in, but yet they realise that… what is it… that's their core. They're supposed to do that.

INTERVIEWER: Yes.

INTERVIEWEE: Because of… they need [sponsors? 00:36:43], they need… so but they tend to think that… they give out a lot of money to departments…

INTERVIEWER: Yes.

INTERVIEWEE: …so departments should just do as they say.

INTERVIEWER: Yes.

INTERVIEWEE: You see?

INTERVIEWER: Yes.

INTERVIEWEE: You see?

INTERVIEWER: Yes.

INTERVIEWEE: And normally it always happens that someone who has money, of course, will end up willing. They want all the money. They want people to have to come to them and ask for money.

INTERVIEWER: Alright.

INTERVIEWEE: Because of… we have to comply. [Inaudible 00:37:10] comply, [you want to? 00:37:10] [inaudible 00:37:11] no money.

INTERVIEWER: No money.

INTERVIEWEE: No money for you. So, I always [inaudible 00:37:19]. Sometimes they… they come across as like they're [forcing? 00:37:24] things.

INTERVIEWER: Yes.

INTERVIEWEE: Ja. They force things in terms of they don't want to do this thing of [inaudible 00:37:30] [I told you? 00:37:31] in their meetings. [Inaudible 00:37:32] when I used to [ask those questions? 00:37:33]. Who came up with this thing [inaudible 00:37:35]?

INTERVIEWER: Then you know.

INTERVIEWEE: Then you're like: "[Inaudible 00:37:42 pick me."?]

INTERVIEWER: Yes.

INTERVIEWEE: They come up with these things, because I remember, what's this things of [expenditure? 00:37:47]? [Inaudible 00:37:48].

INTERVIEWER: Yes.

INTERVIEWEE: They kept on saying, actually I need to be given a chance and a chance and a chance and a chance and a chance. When are their chances going to stop?

INTERVIEWER: [I'm telling you? 00:37:59].

INTERVIEWEE: You see?

INTERVIEWER: Yes.

INTERVIEWEE: Because there I wonder what they had in their head if that… if you give a student a chance, they will improve… I mean, people will give them a chance, they will improve. Of course they will improve if they're giving them the same [inaudible 00:38:14] the same thing over and over.

INTERVIEWER: Yes.

INTERVIEWEE: Definitely, but unfortunately they know.

INTERVIEWER: Yes, or they didn't [inaudible 00:38:20 [memorise? 00:38:20]…

INTERVIEWEE: They know, but they're just memorising it.

INTERVIEWER: Yes.

INTERVIEWEE: I think most of… most of…most of the [contact? 00:38:25] normally looks at numbers. They normally don't look at… what is it… at the end of the day those numbers, what do they say – these numbers?

INTERVIEWER: Yes.

INTERVIEWEE: Do the students really understand it or are we just saying that the numbers are there to say that students [inaudible 00:38:41] that we are just happy that students are passing through?

INTERVIEWER: Alright.

INTERVIEWEE: Are we afraid that they're now going to the next level, but yet you're not asking are they equipped…

INTERVIEWER: …with…

INTERVIEWEE: …with knowledge to get to the next level. They're happy that they just passed through. Ag.

INTERVIEWER: To [get? 00:38:57] [inaudible 00:38:58].

INTERVIEWEE: Yes. You see? Now, that's what I see about the [relevant? 00:39:02]… what I see is happening at [DHET? 00:39:05].

INTERVIEWER: Yes.

INTERVIEWEE: Like they're more interested in… in changing the numbers, but they're not interested in educating, and because if you educate and they learn, a number of students [will? 00:39:16] [inaudible 00:39:16] change.

INTERVIEWER: Alright.

INTERVIEWEE: You see?

INTERVIEWER: Yes. True.

INTERVIEWEE: But then if you're only looking at the numbers: What will I do with the numbers? The numbers would mean me… I'll have to [sit there? 00:39:23]…

INTERVIEWER: Yes.

INTERVIEWEE: …or I could give them [things? 00:39:25], and I mean, you've got… I know you are going to [make me? 00:39:28] get a number, then you are going to be happy and [you're going to? 00:39:30] shut up. Get off my back. And life [moves? 00:39:34]… life goes on.

INTERVIEWER: It goes on. Yes.

INTERVIEWEE: Yes. So at the end of the day, it [drags us? 00:39:40] us into [that scenario? 00:39:42], …

INTERVIEWER: Yes.
INTERVIEWEE: And which, at the end of the day, you end up being a student that's clueless… knowledgeless, [inaudible 00:39:52], and expect them to interact with people who know more.
INTERVIEWER: Yes.
INTERVIEWEE: I mean, at the age they're at…
INTERVIEWER: Yes.
INTERVIEWEE: …[that we think? 00:40:07] that [they have? 00:40:09] general

knowledge [inaudible 00:40:11] to them.
INTERVIEWER: Yes.
INTERVIEWEE: …are new… new to them.
INTERVIEWER: Yes.
INTERVIEWEE: So it shows you what kind of students you have.
INTERVIEWER: Alright.
INTERVIEWEE: It shows you that [you're trying to take them from basic education? 00:40:25], but basic education is not helping us.
INTERVIEWER: Yes.
INTERVIEWEE: I think basic… [inaudible 00:40:31] basic education is you just have thrown in the towel a long time ago…
INTERVIEWER: Yes.
INTERVIEWEE: …and students have to… they have to fend for themselves…
INTERVIEWER: [Inaudible 00:40:38].
INTERVIEWEE: …when they get here.
INTERVIEWER: Yes.
INTERVIEWEE: But they are taught by basic education that you are given and given and given and given in such a way that when they come here, they get surprised…
INTERVIEWER: …and then…
INTERVIEWEE: …when now when you tell them that you have to work for your mark, and you tell them that fifty percent… I mean, below fifty percent, while they didn't need further than thirty-three, it [surprised? 00:41:01]…
INTERVIEWER: Yes.
INTERVIEWEE: Do you see? So the [inaudible 00:41:03] don't… like these two [systems? 00:41:06] - they're supposed to help each other…
INTERVIEWER: Yes.
INTERVIEWEE: …they're supposed to [feed? 00:41:08] each other – are not… they are like separate entities…
INTERVIEWER: Yes.
INTERVIEWEE: …and students get to [be? 00:41:16]… they get a [bitter fright? 00:41:17] when it comes to…
INTERVIEWER: [Inaudible 00:41:19].
INTERVIEWEE: …to higher education…
INTERVIEWER: Yes.
INTERVIEWEE: …because of… if you take some of our students, [yes? 00:41:25], they move to other institutions. When they get to see the systems out there… because they normally think that everything it's as the same as this.
INTERVIEWER: Yes.
INTERVIEWEE: When they get to see that it's different when they get out there…
INTERVIEWER: Yes.
INTERVIEWEE: …they get to see that… wow… [inaudible 00:41:42].
INTERVIEWER: Alright. Yes.
INTERVIEWEE: And then… but then they wonder why, but not thinking that it's environment, but they themselves also…
INTERVIEWER: …contribute.
INTERVIEWEE: …contributed that environment in terms of they don't expect… they don't want to… be forced on them… they don't want to… they don't want someone to expect more out of them. [Inaudible 00:42:03] expect more out of them is better then.

INTERVIEWER: Yes.
INTERVIEWEE: It's because there's someone else who expects less and they are happy with [that? 00:42:10] and [why? 00:42:10] [can't it be like that? 00:42:11] [inaudible 00:42:12].
INTERVIEWER: Yes.
INTERVIEWEE: [And now they're exposed to an? 00:42:12] environment where everybody now expects more and it becomes a problem. [Because now? 00:42:21] remember, most of these students [who come here? 00:42:25], [inaudible 00:42:27], but some of them are coming from [inaudible 00:42:32], they're coming from [inaudible 00:42:33]…
INTERVIEWER: Yeah.
INTERVIEWEE: …they're coming from Cape Town…
INTERVIEWER: Yes.
INTERVIEWEE: …and you look at their transcripts…
INTERVIEWER: Yes.
INTERVIEWEE: …and then you ask… I'll ask them why… why… what were you doing?
INTERVIEWER: [Inaudible 00:42:46].
INTERVIEWEE: Yes. [Inaudible 00:42:47]. Ja! [Put it down? 00:42:50] there. [Inaudible 00:42:51] you are coming to the easiest one.
INTERVIEWER: Yeah.
INTERVIEWEE: Yes, [inaudible 00:42:55] on my diploma. You see how now we are perceived…
INTERVIEWER: [Inaudible 00:42:58]…
INTERVIEWEE: …how we are perceived?
INTERVIEWER: Aha.
INTERVIEWEE: We are perceived as, if you go out to other institutions, definitely you don't [know? 00:43:06] a story and you go with that thing of… the same attitude you had from high school…
INTERVIEWER: Yes.
INTERVIEWEE: …none of us make it.
INTERVIEWER: Yes.
INTERVIEWEE: You have to change your mind-set, but if you're not willing to change your mind-set, you're not going to make it there.
INTERVIEWER: Yes.
INTERVIEWEE: So the first [summation? 00:43:19] is that... go to this with [inaudible 00:43:22]…
INTERVIEWER: Then you will get something.
INTERVIEWEE: …then you will get something… you will come out with something. You see?
INTERVIEWER: It's true. Hey, alright. No thanks [00:43:31].
INTERVIEWEE: [Inaudible 00:43:32]…